

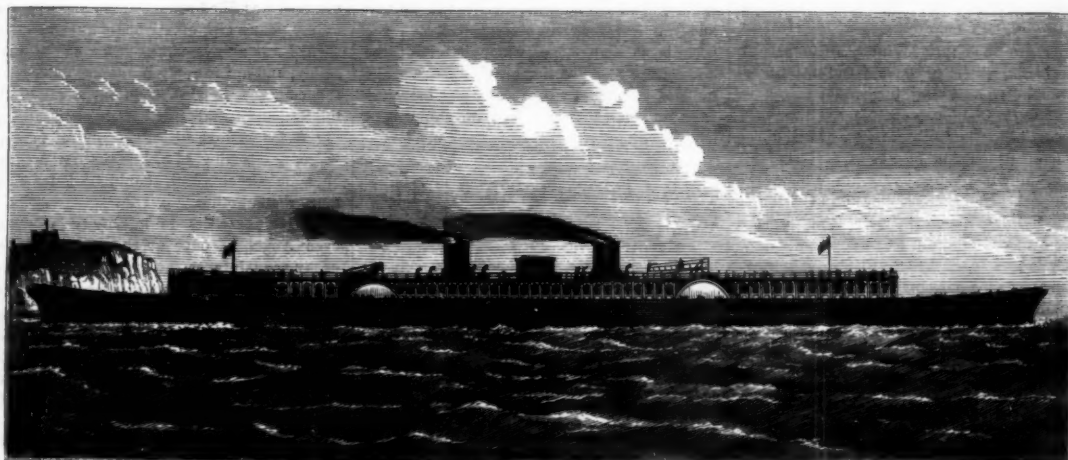
# APPLETONS' JOURNAL.

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## PROPOSED STEAMERS FOR THE STRAITS OF DOVER.

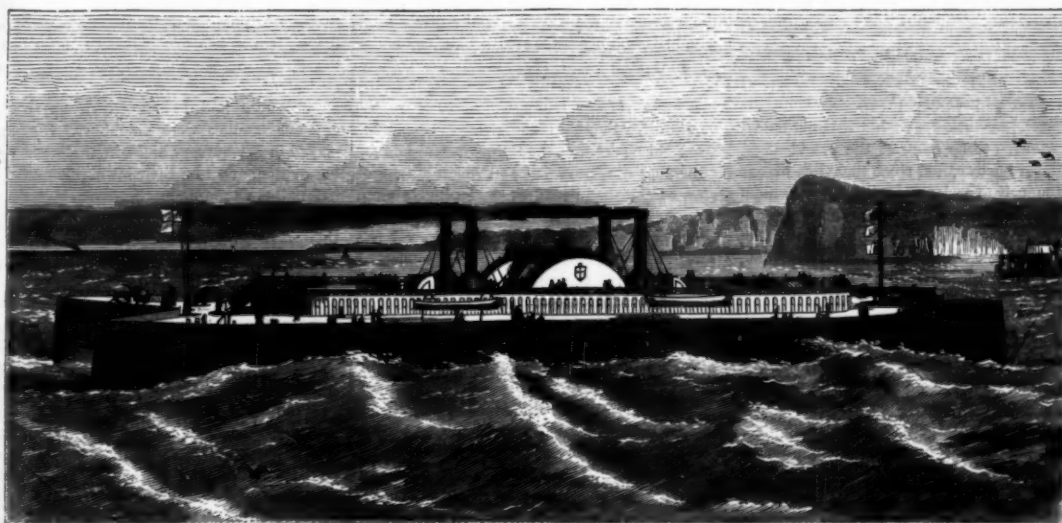


MR. MACKIE'S STEAMER.

THE smallness and inconvenience of the steamers which cross the Straits of Dover have elicited no little denunciation from travellers. As year by year the intercourse between England and France has increased, the discontent at the discomforts of

the Channel-passage have been more and more loudly expressed, until there has become a general movement for the purpose of securing a remedy. Some of the schemes—as a tunnel under the straits and a bridge over them—have been startlingly extravagant; but

the more practicable plans involve simply the construction of suitable steamers. We give here, copied from the London *Graphic*, views and descriptions of two of the more recent steamers projected, one known as the Mackie, the other as the Dicey steamer:



CAPTAIN DICEY'S STEAMER.

"In the design of the Mackie steamer the composite box-girder is taken for the fundamental structure—a form of construction whose strength and lightness are beyond all question. Starting from a double-bottom platform, or, as it may be termed, a long and wide tubular raft, the sides of the ship and the walls of its saloon are built up. Four rigid, longitudinal girders, twenty-six feet deep in the web, extend the whole length of the vessel, and are boxed together and to the entire hull by the main deck, and these girders are again boxed together at top by a promenadedeck, eighteen feet above the sea, constituting one homogeneous fabric of great strength and rigidity. The spaces between the two girders on each side within the hull proper are thus formed into two tunnels or water-ways, which pass from end to end of the ship. The paddles, instead of being, as in ordinary steamers, outside the hull, are placed within these water-ways. This novel mode of propulsion has been severely and successfully tested by Mr. Mackie in his working-model. The space enclosed by the longitudinal girders above the main deck forms a saloon three hundred feet long, sixty feet wide, and twelve feet high, with private side-cabins and retiring-rooms, affording the most ample accommodation for more than a thousand passengers. Mr. Mackie further claims that his vessel is the type of absolute safety. Longitudinally divided into three buoyant water-tight sections, and these again intersected by four bulkheads, she practically consists of twelve compartments, and would, in consequence of these subdivisions, be able to endure the heaviest damage without any fear whatever of foundering. The engines in the interior hull or compartment, and the paddles in the water-ways, are also perfectly secure from damage by collisions, and protected from external injury of every kind.

"The estimated speed of Mr. Mackie's original vessel was twenty miles an hour, regular working-rate; and now that, in his latest design, he has reduced the beam from ninety feet to eighty feet, in order to get still finer lines, there is little doubt this speed will even be exceeded.

"Mr. Mackie asserts that there is a completeness in his project due to practical knowledge and personal experience of the traffic. Three years ago his original model was shown at the *soirée* of the president of the Royal Society, and since that time he has continuously experimented with a steam-model (some ten feet in length) both in smooth and rough water. He has the merit of being first in the field, as his patent is dated 1869, while that of his competitor, Captain Dicey, is dated January, 1872. He claims that his invention will secure a commodious Channel-passage, without extension of harbors or any important works, and will also insure safety, steadiness, speed, handiness, and power of steering.

"The steamship proposed by Captain Dicey, and for the construction of which a joint-stock company has been formed, may be described thus: 'A vessel is, as it were, cut in half longitudinally from stem to stern, the two halves are united by girders, the paddle-boxes are placed in the middle, while over

the girders is a spacious deck with large saloons, and cabin accommodation thereon, and over the saloon a fine deck for promenade.' The idea of this vessel is derived by a rude device used by Indian boatmen for neutralizing the action of the surf. The inventor claims that such a vessel cannot roll in a sea-way, because the length of lever between the two hulls must keep them steady, and, therefore, he thinks that sea-sickness would be almost entirely avoided; while, as the draught would be very shallow, and stem and stern constructed alike, no deepening of the existing ports will be required, and the ship need not turn to go out of port. The space for cabin and saloon accommodation will be two hundred feet long by sixty broad, and the deck is so high out of water that it will be beyond the reach of the heaviest seas. The hulls of the vessel will be available for luggage and cargo, which can be shipped or landed without removal from the vans."

## THE CROSS-EYED ANGEL.

AFTER THE GERMAN OF ADELINE VOLCKHAUSEN.

OUR old nurse was the first to call me "Cross-eyed Angel;" her example was followed by my brothers; theirs by the children in the neighborhood; and, later, the example of them all was followed, I am quite sure, by the gentlemen whom I met at parties, went with to picnics, and danced with at the casino.

In the nursery I was indifferent to the nickname—so indifferent, indeed, that I myself sometimes employed it; and, although my older brothers occasionally used it as a means to tease me, it never really wounded my feelings to be called by it, until I heard it cried out behind me for the first time on the street.

I came home crying, and declared I would never go out again; but I allowed myself to be consoled by my mother, who explained to me that the word "angel" far outweighed the offensive qualifying term, adding, as she passed her hand lovingly over my head, that there was not a little girl in the whole city who had such beautiful golden hair as I had.

That was, perhaps, true, but the golden richness of my hair did not lessen the terrible squint of my left eye. I must try to conceal it, I thought; and, as I had read in some old books that the Baroness of—I don't remember what—a prim and venerable spinster, admonished her nieces and other young damsels to clasp their hands before them, to look down, and never at the bachelors, I resolved to range myself among her disciples.

But I found this very embarrassing; and, when I met acquaintances, it was quite impracticable. I therefore was compelled to give it up, and to look at everybody as I always had done, except the boys in the street. I considered them as my greatest enemies, and avoided them in every way possible. On the whole, I think I endured the irremediable with a fair share of resignation. I say irremediable, because it seemed as though there was no remedy for the defect. My parents consulted several surgeons, but they all shook their learned heads, and refused to undertake the operation. My case,

it seemed, was not an ordinary one; the operation required was more severe than the one usually performed in such cases, and the result was very doubtful.

My father and mother were, nevertheless, both in favor of having the operation performed, but I had not the courage. I shuddered at the mere thought of having my eye cut, and then I feared I might lose it entirely. Being cross-eyed I thought far better than being one-eyed.

In one respect, at least, my misfortune did not operate to my disadvantage. In society I never had the mortification of being neglected; and at balls and dancing-parties my card was filled sooner than, perhaps, that of any young girl of my acquaintance. But, then, I was always careful to be cheerful and sunny, and not to reply in monosyllables; on the contrary, to always do my share of the talking, and to talk my best, without appearing to be in love with the sound of my own voice, or seeming to think that I was Sir or Madame Oracle, and should be listened to more than another.

"One never tires of talking to the Cross-eyed Angel," I once overheard a gentleman of my acquaintance say to another. Ah! but the compliment the remark conveyed was not sufficient to assuage the pain the nickname caused me, far as the speaker was from any intention to be unkind.

A certain timidity and bashfulness, which was altogether foreign to my nature, usually came over me, and lasted for a time, after being unpleasantly reminded of my bodily defect. At such times I would retire to some obscure corner—shed, perhaps, a few tears—and remain, until, getting out of patience with myself, I would cry: "Ah, fie! If they don't like my looks, they need not look at me!" and I would sally forth again.

It was, perhaps, on account of her beautiful eyes that I was so partial to my friend Charlotte. I, at all events, sometimes thought so, and often expressed my admiration for them to her, when she would reply that I, too, would have handsome eyes if—! Ah! that unfortunate "if"! As they stood in their sockets, the one looking one way and the other another, they were little short of repulsive.

Charlotte and I had grown up together; our families were neighbors. She had played in our nursery and I in theirs; she in our garden, and I on their lawn. Thus habit had united us more closely than choice would have done; but, although when I grew up, this was sometimes unpleasantly apparent, still, from force of habit, our relations remained unchanged.

The atmosphere in our house was very different from that in Charlotte's. Her parents were rich, and belonged to the so-called fashionables. They kept a little army of servants, who, we always thought, did much to pamper and spoil the children. Charlotte was, perhaps, the most spoiled of any of them, which was in some measure due, doubtless, to her being the only daughter. She was not only not required to do any thing, but she was not allowed to do any thing, that pertained to household duties. She was surrounded by a certain do-nothing, would-be

poetic nimbus, which falls to the lot of women in exclusive circles only.

I, on the contrary, was brought up in a very plain, old-fashioned way; at a very early age I had my share to perform in the domestic duties of our modest establishment, and I learned betimes how to use my needle. At school I overtook Charlotte, although she was two years my senior, and entered the first class at the same time she did. But, as I had always intended to be a teacher when I got old enough, it seemed to me very natural that I should study harder and know every thing better than Lottie, who would be rich, and never have to do any thing for a livelihood.

My father occupied himself a great deal with us children; his leisure hours were always given to us. From him we learned more than in school, and in a much more agreeable manner. His was one of those natures that are not content unless they are continually communicating to those around them whatever they may know that is worth acquiring, and consequently always act as an incentive to others to make daily additions to their stock of knowledge. To this peculiarity of my father was doubtless due the fact that my mother, despite her manifold household duties, retained a certain mental youthfulness and freshness to the day of her death. He always exercised a sort of supervision over our reading, talked with us about what we read, and, indeed, often read to us aloud himself.

No wonder that our house was called a "learned house;" and when any one, for a change, called me any thing but Cross-eyed Angel, it was sure to be "Learned Lizzie;" which, to me, was scarcely an improvement, as I could not abide the abbreviation, and especially the "ie" termination. I very much preferred my full name—Elizabeth—to any thing else.

Go where I would, I found no house that was better kept, in which there was more real comfort, or where the inmates enjoyed themselves better than we did; even Charlotte confessed that, although it would have been hard to find a house in which there was a greater absence of what is called "style."

My father was a lawyer. He stood high in his profession, and was consequently always fully employed. It was, therefore, very natural that the young jurists who located in G—, or came to fill government positions, should not only call on us, but should be invited to our little entertainments whenever my father saw no reason why their visits should not be encouraged. In criticising these young people, he showed them no mercy. He condemned their weaknesses and failings, when we were alone, with a severity that sometimes surprised me; but later it was clear to me that he did it solely on my account, in order that I should not indulge in romantic illusions with regard to persons of questionable worth. This was undoubtedly the reason I never had any little love-affairs to recount, like all the young girls of my acquaintance, especially Charlotte, although I certainly received as much attention as the others.

"The son of one of my oldest and best friends is to be sent here as assessor," said my father, one day, at the dinner-table, as he took a letter out of his pocket.

"Who is it?" asked my mother. "Young Eberhard?"

"Yes," was the reply. "Paul Eberhard writes me: 'Let me recommend my son Carl to your kind offices. He is steady and capable. If one of your sons should come to Berlin, he will find the door of my house always open to him, and I am sure Carl will always be a welcome visitor at yours,' etc."

"Certainly—certainly he will!" cried my mother; "and don't you think you had better write to say that we shall be glad to have the young gentleman stop with us until he finds rooms to suit him?"

"That is just what I was about to suggest to you, my dear," replied my father. "Very well, I will write this evening. He will doubtless find suitable lodgings in two or three days, at farthest. There are plenty vacant, go where you will."

Thus it was that Carl Eberhard came to be our guest: i. e., to occupy the cosy little spare room that looked out on the garden, and which, with the large acquaintance of my hospitable parents, was never long without an occupant. It was, therefore, nothing new for us to have a guest in the house; we were, however—especially father—somewhat more curious than usual, for our expected guest was an entire stranger to us all.

Carl Eberhard came, and, in personal appearance, was very like his father, who had been at our house often. He was tall and slim, with a handsome face, the most attractive feature of which was—not in my opinion alone—his large, expressive eyes, which immediately reminded me of Charlotte's.

"What a pity," I thought to myself, "that Charlotte is not at home! I should be glad to see what the effect would be of these two pairs of eyes looking at each other."

I, at that time, had passed my eighteenth birthday, and still it seemed to me that our guest was inclined to treat me as a child, although I could not complain that his manner toward me was not perfectly well-bred and respectful. Short and slight as I was, he literally looked down on me; and, still accustomed to romp occasionally in the garden with my younger brother Albert, I thought little of supporting the dignity of a young lady.

Albert, who was at college, was of course learning Latin, which he found very difficult. I, too, had learned something of Latin, partly *en passant* with my older brothers, by hearing them say over their task and by devoting a little time to it, and later by applying myself more closely under the tutelage of my father. "It not only adds to our general knowledge of language, but it accustoms us to think logically," he used to say; "and, to a woman especially, the latter is of more importance than the former."

Albert sat in the garden near the house, learning the prepositions with the accusative. The more difficult he found it to get them into his head, the louder he repeated them. *Ad, apud, ante*, he began any number of times, always sticking fast at the seventh or eighth word.

"*Circa, circiter, erga*," I helped him forward, as I continued to weed my favorite flower-bed.

"*Ob, pene, per*," and he stuck again.

"*Post, prater*," I cried out to him; and, as he still stumbled over them, I began the list, and went through them with a celerity that would have done credit to an old-time pedagogue.

"I have them in my memory so fast that I shall never forget them," I added; "but they are terribly hard to learn at first."

"Heaven knows, they are!" sighed poor Albert.

"Miss Elizabeth, can you repeat the prepositions with the ablative also?" asked a familiar voice from above us.

I looked up. Eberhard was leaning out of his window, and had heard and seen all that had passed.

I felt my face redden, and for a moment I was silent; then I burst into a hearty laugh and began, "*a, ab, absque*," and so on, with lightning rapidity to the end of the list.

"Is it possible, Miss Lizzie, that you know Latin? and so well?"

Albert and I laughed heartily at the question, which, more in the tone than in the words, expressed the greatest astonishment. Eberhard disappeared from the window, and a few moments after joined us in the garden.

"I thought at first," he began, "you had only picked up a little—from your older brothers, perhaps."

"Oho!" cried Albert, at the top of his voice, "our little learned Lizzie knows her Virgil and Cæsar with the best of them, I can tell you. I wish I only knew them half as well!"

There was an expression of such utter amazement in Eberhard's face that we could not help laughing again.

"You are the first lady I have ever seen who knew Latin," said he. "Had I known this before I came, I should have imagined the daughter of my father's old friend very different from what I found her."

And when I asked, "How so?" the reply was in accordance with the notions that have prevailed since the time of Moses and the bulrushes, I imagine—that a learned woman must be old, ugly, and pedantic: "Instead of this, I find you," added Eberhard, "a veritable Amaryllis, even to the rake." I had picked up one a few minutes before he came down.

"I never could understand," said I, "why people think it so strange that a girl should learn Latin, when they think it very natural and proper that she should learn French and English, Spanish and Italian."

This was the starting-point of quite a lengthy conversation, the first really that had ever taken place between us, and I can, therefore, truly say that our acquaintance began with the accusative.

"There is nothing I admire more in a woman," said Eberhard, "than real culture—solid attainments; but we meet with it so rarely, especially in women of your age! How do you, pray, chance to form such a notable and praiseworthy exception? how did you acquire so much knowledge?"

So much knowledge! I knew well that I, in reality, possessed very little—that I had learned nothing thoroughly.



"How did I acquire what little I know?" I asked.

"Yes; that is what I should like to know," returned Eberhard.

"Well, I left school at fifteen, the age when men—those, at least, who are considered liberally educated—really begin their studies," I replied. "Since then, my only opportunities have been those afforded me by my home associations, and my only teacher has been my father; but I have necessarily been very irregular in my studies, and, what you are pleased to call my learning, in a man you would, I am sure, call only a superficial smattering. So little is demanded of a woman in the higher branches of human knowledge that a little goes a great way."

From this theme we went to others of a kindred nature. I talked a good deal, and talked, I thought afterward, unusually well, for, although Eberhard spoke with a certain air of superiority, he nevertheless listened to me very respectfully, and I felt a healthful inspiration in exchanging ideas with him that was as agreeable as it was new.

I have long since forgotten what I had said, but I looked up at Eberhard for a reply. He was silent, and the expression of his face was entirely changed. He seemed occupied with some thought foreign to the subject we were discussing; but he looked me full in the face, and it seemed as though his large, dark eyes would penetrate my inmost soul.

I felt strangely embarrassed and confused. Suddenly it occurred to me that he was looking at my turned eye. My face became crimson at the thought; I turned away, and my unconstrained manner was gone. He tried to reestablish the former familiar tone, but his endeavors proved fruitless.

Eberhard experienced great difficulty in finding rooms that suited him. Now he objected to their northern exposure, now to their being on the third floor, and now to their being too far from the side of the town on which we lived.

He was with us over two weeks before he found quarters that suited him. They were in our immediate neighborhood, and, indeed, were so situated that he could overlook a portion of our garden from his windows. True, he had a northern exposure, but that little objection was more than counterbalanced by other considerations.

During these two weeks we became right well acquainted. The weather being remarkably pleasant, we spent a good deal of time in the open air, and, when Eberhard's time admitted of it, he joined us on the veranda, or he sought me out in a favorite and retired spot in the garden under one of the two stately linden-trees, between which my father had placed a plaster statue of Justice. During the hours when the sun shone on the porch so as to make it uncomfortably warm, it was shady and cool under the lindens, and consequently we often drank our coffee in the afternoon gathered around "Madame Justice," as we were in the habit of saying.

The preparing of the coffee, while my father and mother took a *siesta*, was my office. Albert usually put in an appearance at the coffee-hour, but not always. Eberhard, however, never failed. He was a great lover

of good coffee, and at first I suspected his promptness was due solely to his desire to get the decoction as soon after it was made as possible.

Eberhard was, in fact, something of an epicure, and he did not pretend to deny it. He had not been with us more than two or three days when he took occasion to say: "The man who is not himself rich is in duty bound to look out for a rich wife. I, for my part, can't conceive of a domestic establishment, in which there is any real comfort, that is not supplied with ample means." This little speech, which, under the circumstances, was in doubtful taste, led to a discussion between him and my father, in the course of which he remarked further: "And my wife must not only be rich, but she must also be beautiful and cultured, for I would be proud of her always and everywhere."

Why had this conversation left such a painful something in my remembrance? What was it to me if he would marry no woman who was not rich and beautiful? It ought to be a matter of perfect indifference to me. But it was not a matter of indifference to me, and I was frightened when, a few days afterward, I caught myself soliloquizing, "But you are not rich nor beautiful!"

Did I, then, want to be his wife? I had really never asked myself this direct question, but, for the first time in my young life, I found myself at all hours occupied with a man who, to my imagination, was the perfection of manly beauty and a model of manly dignity, and that man was Carl Eberhard.

## II.

The day before Eberhard was to leave our house, I sat at the usual hour under the lindens, with my coffee-apparatus before me. I was alone, but I knew Albert would be there soon, and the assessor never kept us waiting. He came as usual, promptly.

"Do you see that window yonder to the right of the church?" he asked; "the one with the red curtains?"

"Yes, I see it. Why?"

"That is one of the windows of my new quarters."

"So mother told me."

"I shall often sit there and look over here."

"Madame Justice, I am sure, will be very much flattered."

"Oh, Madame Justice will not be the attraction; but Miss Elizabeth—"

"Or, more literally, Miss Elizabeth's coffee," I suggested. "Perhaps your delicate olfactories will detect its aroma even at that distance; but, whether they do or not, you know the hour, and will always be honestly welcome."

"Pray, do not jest, Miss Elizabeth!"

There was a serious tremulousness in the tone of his voice that startled me. I looked up, and the gravity of the situation flashed upon me so clearly that I, for a moment, feared I should lose control over myself, so great was my agitation. I made an effort to continue my coffee-making, but I found I had not strength to lift the kettle in which I was boiling the water. Eberhard seized the hand with which I made the effort, and, clasping it

in both of his, he asked, in a tone full of passion:

"May I come again, Elizabeth—may I?" He pressed my hand hastily to his lips and released it, for we heard Albert coming.

I nodded a "yes;" I was too full to instruct the monosyllable to my lips.

A moment afterward Albert emerged from a clump of lilac-bushes near by, singing one of his college-songs, and so occupied with a bunch of flowers he had in his hand as to prevent his noticing my agitation. Eberhard had hastily pressed my hand again and disappeared in the opposite direction, and thus time was given me to recover my self-possession before my father and mother came and Eberhard returned.

A little more than two weeks afterward we were formally betrothed. I loved with all the ardor of my impulsive nature; the whole world appeared to me in the tints of a cloudless May morning; till then it seemed to me I had never known what it was to be happy.

If there was any thing that prevented my being perfectly blissful, it was a certain resignation with which my father consented to my betrothal. He contended that I was too young to marry, and said he would have been better pleased to have seen me remain single at least four or five years longer; but that he had only my welfare at heart, and trusted that all my hopes would be realized.

Of this I had not a doubt, what *fancie* ever had? True, I knew only too well that I believed to answer all the conditions my betrothed had demanded of the woman whom he would select for his wife, but I believed they were forgotten by him as they were by me, and that Eberhard was content with me as I was. I was in error, as I shortly discovered.

One day, as Carl said to me, "My angel," and I laughed and corrected him, "My cross-eyed angel," he replied: "My child, don't say that; I don't like to hear it."

"Why not?" I asked.

"Well, I think it is very natural I should not like to be reminded of the unfortunate blemish to your beauty," he replied.

"Ah, Carl, in course of time you will get so accustomed to it that you will not notice it."

"Do you think so? I doubt it," said he, in a tone that, it seemed to me, for a moment fairly stopped the pulsations of my heart.

I looked at him amazed.

"I mean only," I stammered—"I mean mother says she never notices my being cross-eyed except when some one calls her attention to it."

"Your mother—yes, perhaps that is possible; but—" He paused, and added in a propitiatory tone—"but you are beautiful, my dear, if the axes of your eyes are not parallel."

"No," said I, and my eyes filled with tears, "I know very well I am not beautiful, nor am I rich, either."

"Child, what nonsense! Have I ever seemed to care whether you were rich or not?"

"No matter, I have heard you say you would never marry a woman who was not rich."



"Fie! fie! what does the tongue not say when it is unchecked by the heart! And you—did I not hear you say, the other day, that you used to think you would never marry any one but a prince, or a baron, at least?"

That was true, and I could not help laughing.

"I think we have sufficient proof of our mutual love," he continued, "since you are not rich, and I am not even a baron; and as for your beauty—" The words seemed to stick in his throat.

"Ah, my eyes!" I cried, and buried my face in my hands; "what a source of unhappiness they have always been to me!"

"But, my dear Lizzie, that is your own fault," Eberhard replied.

"Perhaps, but I can't help thinking of them."

"Nor would I have you help thinking of them; on the contrary, I would have you think of them till you can get up courage to have the defect remedied."

I let my hands, which till now had covered my face, sink into my lap, and looked up at Eberhard inquiringly. He made a gesture as though he would turn my left eye out. I understood his pantomimic reply perfectly, but I did not look down, or this time even sideways; I was too desirous to read the expression of his face.

"What do you mean, Carl?" I asked.

"Why, I mean—I mean that you should submit to an operation."

My lips trembled, and I was deathly pale. If I had been standing, I believe I should have fallen to the ground.

Eberhard took my hand and wanted to caress me, but I involuntarily drew it away from him and rose to my feet.

"Do you know," said I, and I was startled at the sound of my own voice—"do you know that the operation would be attended with great danger?"

"Yes, I know, but—but—there is always more or less danger attending every important surgical operation," he stammered. As I made no reply, he began again, after some minutes:

"But, my dear Lizzie, you are such a perfect little beauty that this defect is like a single speck in an otherwise spotless marble statue; and I love you so, so fondly, that I would see in you that perfection Nature intended you to possess."

I was still silent.

"Speak, Lizzie, do!" he entreated; but two big tears that rolled down my cheeks were my only response.

"What! you weep? Oh, what a barbarian I am!" he cried. "Come, come, my love, we will talk no more about it. Forget what I have said—for to-day at least. I will not—"

"Yes, yes, we will talk of it," I interrupted, for I had formed an unalterable resolution. I was so deeply agitated that I could not continue immediately. During the pause, Eberhard fixed his eyes on me with an expression of intense solicitude. I watched him closely.

"I am ready—no, no!" and I motioned him not to touch me; "I am ready," I continued, "provided the physicians will under-

take it, and my parents do not oppose it, to do as you would have me."

Now, in spite of me, he threw his arms around me, and cried in a paroxysm of delight:

"What better proof than this could I have of your love for me? Never, never in my life will I forget this. How beautiful you will be, and how delighted you will be with yourself! And, as for the danger, Dr. Waltenstein assures me that, in his opinion, it is not great. He says he is almost certain the operation will be successful."

I discovered, therefore, that Eberhard was already thoroughly informed with regard to the dangers attending an operation, and the probabilities regarding its result—which showed how much the matter interested him, and that, too, just when I for the first time in my life had ceased to think of it.

Meanwhile, after I had recovered from the first shock his proposition gave me, I said to myself that he had only my good at heart, that he was prompted solely by his love for me, and that it would be simply cowardice on my part not to submit to an operation, if the physicians thought there was a probability of its being successful.

### III.

DR. WALTENSTEIN was the assistant of the leading oculist of our city. He had been a fellow-student of Eberhard's, who always spoke of him in the most eulogistic terms, both as a man and as a surgeon. Eberhard, indeed, would have been glad to have had Waltenstein perform the operation, but to that my parents refused positively to consent.

I had some difficulty in getting the consent of my mother, but, now that my mind was fully made up, all efforts to dissuade me were fruitless; besides, Eberhard lost no opportunity to encourage me, and to represent the severity of the operation as being much less than I had always supposed it. At last I, too, became fascinated with the idea of having straight eyes, and could not understand why I had not insisted on being operated on before. My great love quieted every fear, removed every misgiving; it alone gave me courage and confidence. The desire to please Carl, to be perfection in his eyes, would have reconciled me to any thing.

I urged the early performance of the operation, which necessitated my spending some time in the ophthalmic institute. How kind and sympathetic every one was during this time! My father and mother more so, it seemed to me, than ever before, and Charlotte, who had returned home, promised to visit me daily, and fully approved my resolution.

"You owe it to your betrothed," said she; "he is himself so handsome—and what handsome eyes he has!"

"He has eyes just like yours, Charlotte," said I.

"Like mine?"

"Yes, I noticed the resemblance the first moment I saw him. Oh, how beautiful such large, dark eyes are!"

Although Charlotte was evidently flattered by this comparison, she seemed inclined to

question the great similarity, but it was unmistakable, notwithstanding. Carl remarked to me a day or two after she returned:

"Your friend Charlotte's eyes are so like my own, that they inspire me with a certain interest in her. She is not a beauty, but she has something about her that is very attractive, nevertheless."

The dreaded hour finally came and passed in a manner satisfactory, it seemed, to the operator and his assistant, Waltenstein. Of the ultimate result they said they could not judge with certainty under about two weeks, and that, in any event, I would have to be kept in a dark room, with my left eye bandaged, for perhaps a month.

At first, I was not allowed to see any one, i. e., receive any one except my parents and Carl. Mother remained with me all the time; father and Carl came always once, and sometimes twice, in the course of the day. But when the first feverish restlessness had passed, Albert and Charlotte were allowed to come. The latter insisted on being permitted from this time on to take my mother's place for a part of the time, as she had an abundance of leisure, and mamma was greatly needed at home. And so it was arranged. For the night we engaged a nurse, and, as for the day, Charlotte spent usually nearly the whole of it with me, while Carl and the rest came frequently, but never more than two at a time in obedience to the doctor's wishes.

During the first days, the surgeon who operated on me came accompanied by his assistant, then the latter came alone. His visits soon became very welcome; his manner was very soft and sympathetic, and his voice exceedingly agreeable. How he looked, I hardly had an idea, for I scarcely knew him, although he knew me very well by sight, he said, and had long had me in his eye as a good subject upon which to exercise his art. He often prolonged his visits, especially when he chanced to find Carl there, of which I was always glad, as, when he was present, the conversation always took a higher range and became more animated.

I myself took very little part in these conversations, for they were always carried on behind my back. My invalid-chair was so placed as to turn my face from the window, while my visitors naturally gathered together directly before it, where it was light enough to see tolerably well—at least, so Charlotte told me. It was there she usually sat with her knitting, or some other kind of work that did not require much light.

Carl, certainly, ought not to have found his visits tedious, had he spent the time he devoted to them beside me, if it was not so light; but I thought that, perhaps, he did not think it in good taste to do so when Charlotte was there, and that he wanted to show his gratitude to her for her kindness in devoting herself so faithfully to his betrothed, and certainly it was very proper that he should do what he could to shorten the long hours she spent with me.

I was surprised only at the familiar, bantering tone they so quickly fell into. Charlotte was always inclined to be a little ungracious, and I was pained to discover that Carl had a kindred trait in his character. Neither

of them was without wit, and, rather than lose a clever conceit, there was hardly any one they would have spared.

In all things else I thought them wholly different, for I knew Eberhard only as an earnest, thoughtful man, a man who, like my father, prized none of the things of this world so highly as those of the mind. It was thus he had appeared to us all during our short acquaintance with him. Charlotte, on the contrary, had no taste for intellectual pursuits, and was, in reality, very ignorant. At school, it had always been very difficult for her to learn, and she had not supplied her want of aptitude by industry, and now she never thought of taking a book into her hands. She and I, for all that, had so much in common that I always found her an agreeable companion; but that Eberhard should, also, be drawn toward her surprised me. I supposed it required something in a woman, quite other than what she possessed, to interest him; but now I saw her lead him easily into a domain that rarely ever rose above the trivial.

In consequence of the operation, and of being deprived of fresh air and exercise, I had become somewhat nervous and irritable, and, therefore, was sometimes affected unpleasantly by jests and witticisms that, under ordinary circumstances, would perhaps have amused me. Carl never seemed to tire of taking Charlotte's ball of thread, and doing all kinds of mischief with it. At one time he would unwind it till she would scold, then he would wind it up to her hand; at another he would have the presumption to watch his opportunity and slip the ball into her pocket, and then after a while to take it out—things, which I, of course, did not see, but which Charlotte's remonstrances, a blow on his hands, etc., enabled me to divine. They would often laugh heartily, when I could not imagine the cause, and, if I asked the reason, it is doubtful whether they always answered truthfully.

On one of these occasions, I remember, he came behind the screen that separated me from the rest of the room, and said: "You must not allow our nonsense to make you nervous, Lizzie!"

I pressed his hand nervously, and cried: "Ah, Carl! how glad I shall be when I get out of here!"

"And how much I admire the patient resignation with which you endure this imprisonment, for you cannot call it any thing else," he replied. "Only a woman could do it. I confess a few minutes in the sombre hole is quite enough for me!"

"And I am, I assure you, not so selfish as to want to detain you longer than your inclinations prompt you to remain," said I, releasing his hand. "I myself shall not remain here any longer than I am compelled to, I assure you."

"And that will not be long. You will soon be released, and Miss Charlotte too," he replied, and returned to where she sat before the window.

"This confinement has already robbed you of some of your color, Fraulein," I heard him say to Charlotte.

"Ha! how can you tell any thing about

Charlotte's complexion in the dark?" I cried out to him, in a jocular tone.

"True; but I met her yesterday near the square, and," he added, somewhat hesitatingly, it seemed to me, "and walked home with her."

"Which was quite unnecessary," Charlotte informed him, very emphatically, and thereupon they fell into their usual bantering tone, while I reflected that Carl, on his way to see me, had turned back to escort her. "Heaven grant," I said to myself, "that I may not be a sickly wife, for that is clearly something he could not endure!"

Then suddenly the question suggested itself why he did not come to me after seeing her home, and the reply came to me quite as readily: because he knew Charlotte was not here.

The thought was like a dagger-thrust that reaches the heart. Now, much that had seemed strange and unaccountable, appeared to me in mid-day distinctness.

From this moment I suffered all the torments of jealousy and wounded pride, of which, however, no one had the least suspicion, although I was never really calm except when my father or my mother was with me. They always sat beside me; they found no difficulty in breathing behind my screen, and my mother, whose hands were so rarely idle, rested willingly where it was too dark to see to do any thing. Even Albert seemed to think it perfectly natural to sit beside me when he came, and amuse me by caricaturing his teachers, and telling me of the pranks of the scholars.

True, no one spent so much time with me as Charlotte, and I was compelled to preserve the semblance of gratitude, although I knew that hers was not a self-sacrificing nature, and that, when any thing ceased to amuse her, she soon tired of it. When we were alone together, there were, very naturally, long pauses in our conversation; but it seemed to me that she became daily more talkative, although I became daily more silent. When, however, Eberhard came, I was forgotten, and soon I could not help doubting whether he came more to see me than Charlotte.

I determined that no one should know of my fears, my parents least of all. I did not want to disquiet them so long as I had not positive proof of Eberhard's faithlessness, and until then I determined not to change my manner toward him or Charlotte, although I began to really hate her, because she was deliberately, and wilfully, and literally, robbing me behind my back of what was mine.

There I was, powerless, sick, and blind, while she, my whilom friend and my rival, was in the full flush of health and vigor. And, if she was not beautiful, she possessed that for which I had ventured so much, and he for whom I had made the venture—he now turned from me to her.

It would be difficult to convey an idea of the mental anguish I suffered.

Sometimes I was in a furious and sometimes sorrowful mood, and then again I felt only contempt for the two who were making me so unhappy. Ah! and then at other times I was hopeful, and reproached myself for

thinking so meanly of Eberhard and Charlotte, and tried to persuade myself that my fears were groundless, that they were due to my nervous and debilitated condition, which led me to see things other than they were. It all seemed to depend upon the effect the little occurrences of the day had on me.

One day Dr. Waltenstein sat beside me and asked this and that—such questions as physicians frequently ask. Carl, who chanced to be there, talked meanwhile with Charlotte, and louder than usual, intentionally, I thought, in order to make the doctor and his patient feel that they were not being overheard.

"Your pulse has not been so regular during the last week as it was, and your recovery has not been so rapid as I hoped and thought it would be," said the doctor.

I made no reply.

"I am sorry," he continued. "You could have returned home by this time if you had preserved your tranquillity of mind."

"Ah, doctor," I replied, "one gets so impatient."

"No, it is not that," said he, shaking his head, "you are not wanting in patience; there is something that irritates you—what, I have been unable to discover, but, as I have tried every thing else in vain, I shall now insist on your attendant being changed."

Here there was an involuntary movement of my hand, which the doctor had doubtless intentionally held in his.

"Miss Charlotte," he continued, "does not seem to me to further your convalescence," and he laid my hand gently on my lap.

He had discovered my secret. I knew not what to say in reply, and consequently remained silent.

"Let go of me!" cried Charlotte at this moment, in a subdued tone. The doctor rose, made some commonplace remark, and left me, this time with a gentle pressure of the hand, which seemed to say: "Trust to me."

As usual, he remained for a while with Eberhard and Charlotte, and, as I supposed he would, he told the latter before he left of the change he had decided to recommend. He did it in a thoroughly kindly manner, but in the peremptory tone of the physician who expects to have his directions followed.

Charlotte answered angrily, and was evidently most unpleasantly surprised; she had no inclination to give way.

"I beg you will not think," said Dr. Waltenstein, "that the great sacrifice of time you have so generously made for your friend is underestimated or misunderstood"—the pause the doctor made here was, perhaps, not unintentional—"but I think it my duty to insist on putting in your place a professional nurse; if it is desirable that Miss Elizabeth should not suffer from tedium, it is equally so that nothing should excite her."

"But I do nothing to excite her; our conversation is always upon the most commonplace topics," said Charlotte.

"Of that I have no doubt; but to-morrow I will send Frau Neubert!" and, without waiting for any further remonstrances, he took leave. At the door he turned and asked:

"Ah, Eberhard, shall I see you at the casino this evening?"

"No!" replied Eberhard, in a tone the significance of which was unmistakable.

There was now a long pause. I did not feel that it was my duty to be the first to speak, and consequently did not only remain silent, but did not even move.

"Shall you obey Dr. Waltenstein's orders?" asked Eberhard, finally.

"Certainly—I must," replied Charlotte. "I cannot remain after having been told that my room is more desirable than my company."

"This Waltenstein is a tyrant, a despot!" cried Eberhard. "He only wants to show his authority. I know him of old. He always wants to have everybody do his way; which, in his opinion, is the only right way. —Elizabeth," he continued, coming behind the screen, "why didn't you say something? It cannot be a matter of indifference to you whether you have Miss Charlotte here with you all day, or a common, uncultured person."

"Certainly not," I replied.

"Why, then, did you say nothing?" he repeated. "How ungrateful you appear! It is not yet too late to remonstrate."

"No. I prefer not to oppose the doctor in doing whatever he thinks for the best," said I, in a decided tone.

"Perhaps this has your approval?" he inquired.

I was silent.

"Waste no more words upon the matter, I beg of you, Mr. Eberhard," interposed Charlotte; "this silence is a sufficient reply," and she burst into tears.

Eberhard was immediately at her side.

"Come, come, the matter is not of sufficient importance to shed any tears over it," said he. "What I regret most is to discover so unamiable a trait in Elizabeth."

"What do you mean by that?" I asked, in a loud and sharp tone.

"Well—you do not stand up for your friend. You are ungrateful."

"That is not true!" I cried, for my blood began to boil; "but, if you want to know just what my wish is in the matter, I will tell you frankly: that I prefer having another attendant!"

"I see you are jealous!" interposed Charlotte, quickly. That was a home-thrust. In an instant my indignation knew no bounds. I sprang from my chair, threw the blanket aside, pushed the bandage up on my forehead, and stepped from behind the screen.

"Your guilty conscience says that!" I cried. "You know how you have coquetted with Mr. Eberhard, and tried, not in vain, perhaps, to alienate him from me! You have flowers in your hair and pearls around your neck, I see. You would hardly have dressed more, whatever the occasion; and for what, for whom, is all this—while I lie here on a sick-bed, with my eyes bandaged? But I have seen, nevertheless—"

"For Heaven's sake, be calm!" cried Eberhard, in evident terror.

But I was not to be appeased. "I have seen how you have flirted with each other, how he has held your hand and admired your handsome arm," I continued. "I have seen

the glances you have exchanged, and have heard every word that has passed between you, even those spoken in the lowest tones. Oh, Love, or, if you like it better, Jealousy, has sharp eyes and still sharper ears, and I know that you are both false—yes, false to me!"

"You have seen, Elizabeth! how was that possible? But you have the bandage off your eyes! Do you know that you endanger the success of the operation?" remonstrated Eberhard.

"Yes," I cried, pushing him from me, "the bandage is off my eyes! You have never loved me! Why did I not listen to the voice that warned me when you urged me to submit to an operation? But then I was blind—blind, and deaf besides. The result of the operation is still doubtful; but never fear—you shall not have a cross-eyed wife. A cross-eyed wife! and not even rich! The bond that united us is broken never to be reunited, and here you have back your pledge!" And I shook from my finger my engagement-ring, which was now too large, and it fell from the table, before which I stood, to the floor. With this I returned to my arm-chair behind the screen, drew my blanket over me, and wept—wept as though my heart would break.

Fright and self-reproach tempered in Eberhard the anger my words would otherwise have aroused. He paid no attention to Charlotte, who stood with her eyes cast down, the very personification of a guilty conscience, but devoted himself to soothing and pacifying me. I, however, in my grief and indignation, listened only to see if he protested against the breaking-off of our engagement, or against my assertion that he had never loved me.

He did neither.

"O Elizabeth! you will be sorry for what you have done," he exclaimed once, and I understood him to mean that he considered our engagement as being really at an end. I saw clearly that, in the hope of getting a rich wife, he was ready to give me up, and that the catastrophe must have come sooner or later.

For him it came perhaps too soon, and certainly very opportunely, for it made him and Charlotte appear in an exceedingly unfavorable light.

"Let us both consider the matter for a few days, I beg of you, Lizzie," he began again. "What will your parents say?"

I made no reply, and continued to weep.

"Good Heavens! and your eyes! What shall I do? What shall we say to the doctors?"

"Nothing!" I replied.

"That will, perhaps, be the wisest course," said he; "yes, that will be best."

"You have, that is, you insist," he continued, after a pause, "on releasing me from my promise, Elizabeth—but—"

The words stuck in his throat, but I did not help him.

"You accuse me—me and Miss Charlotte; but, much as your accusations pain me, I will not, at present, attempt to defend myself. Besides, I would not hold you to your engagement against your will. No, I could

never endure the thought that I was doubted, and you doubt me, Elizabeth."

"No, I do not doubt—I know," I interrupted.

"And your confidence—"

"I have none."

"You are severe, and I—I would be forbearing. Let us drop the subject; I fear for the consequences. Your giving me back my ring, in this manner, is the strongest intimation you could give me that you would have me return yours. Here it is." And he laid the ring he had received from me on my lap. "I thought to have worn it with me to the grave, and shall not yet relinquish all hope; but I shall wait for a word from you that tells me a reconciliation is possible. I will leave you; you would, doubtless, prefer to be alone. Shall I send a nurse to you?"

"No."

"Well, then, good-by."

"Good-by," I replied, but refused to take his proffered hand.

So I was now alone, for Charlotte had immediately taken her bonnet and shawl, and gone home without any leave-taking.

My tears ceased to flow, but my eyes burned severely. I closed them, replaced the bandage, and leaned back in my chair completely exhausted.

#### IV.

I WAS now truly in darkness. The light of my life had gone out. My thoughts were confused, and, like ill-defined phantoms, they became more and more indistinct until I fell into a consoling sleep that held me in its gentle embrace for some hours. It quieted my nerves, and consigned what had occurred to the past.

When I awoke, I found my mother beside me; my father was also there, and approached me. Ah! I was not alone and forsaken; and, in the first moments, I felt as I imagine one must feel just after having escaped some great danger.

And had I not?

If I had become Eberhard's wife, he would never have forgotten that I was not rich, and I should have had things to endure from him that I could not have borne without a great sacrifice of self-respect. But now I was free, and my love for him had received a thrust which I knew was mortal, although I might now and then, in the immediate future, suffer a momentary relapse. I felt that it was better as it was.

Eberhard was not so barbarous as to leave me entirely alone, after what had occurred; he sent a nurse to me immediately, who, however, found me asleep. In the mean time, Dr. Waltenstein had gone to my parents and told them what he had done, and very naturally had given them an intimation of his reasons for doing so.

My father was indignant in the extreme, and expressed himself in a manner, with regard to Eberhard, that quite astonished Dr. Waltenstein, whose proceeding he thoroughly sanctioned, while he questioned him very particularly with regard to Eberhard's past history, character, disposition, etc.—questions which Waltenstein answered evasively, or very discreetly, laying particular



stress on Eberhard's really estimable qualities, of which, it is but just to say, he had not a few.

Of course, I did not learn all these details until long afterward; at the time, I thought the coming of my parents just at that moment a happy accident. I could not help telling them what had occurred, and in making them, my ever-best friends, my confidants I found great relief.

How the affair really affected them I could not decide; but certain it is that their anxiety, with regard to my eyes, outweighed every thing else. The rupture in my relations with Eberhard they certainly passed over very lightly; in fact, my father intimated, in unmistakable terms, that he was well satisfied with the sudden change in my marriage prospects.

"Eberhard," said he, "would never have been the man I should have chosen for you. With regard to his ability I have never had a doubt; not so, however, with regard to his disposition. You would not have been happy with him, my child, and I am glad that I shall now be spared the reproaches I should have made myself for having been, out of consideration for my old friend, more yielding than I should have been under ordinary circumstances."

As for my eyes, they seemed to be doing well; at all events, they did not burn, as they had frequently, during the previous seven or eight days, when I was continually on the alert to discover what was really passing at the window behind me. Dr. Waltenstein's anxiety concerning his patient prompted him to come again in the evening; but, finding me comparatively quiet and doing well, he put off the examination of my eye till the next morning; he, however, sat for some time and conversed with my father, who stayed that evening much longer than usual.

Mother insisted on remaining with me; but patient and nurse slept soundly the whole night through, and awoke the next morning refreshed and hopeful.

And the final result of the operation?

It was all that could have been desired—it was brilliant, and, when I contemplated it, I, in my delight, even had a grateful thought for Eberhard, but for whom, I often said, I might never have submitted to the operation. To which my husband, Dr. Waltenstein, would reply:

"Who knows? I should never have insisted upon it, that is certain; but it is probable that you would have needed no urging, after witnessing as you have the daily results achieved by our specialty."

"Ah, but for the operation you would never have known me."

"Humph! that is not so certain. Did I not tell you at the time that you had long interested me?"

"Oh, it was the oculist I interested. You surgeons are always looking out for subjects."

"Not so. When Eberhard came here, I hoped through him, to make your acquaintance; but he got ahead of me."

"Alas!—I would not be reminded of it."

"Why not? The road to happiness leads not unfrequently into perilous paths; they enhance the goal when it is attained."

With me this was eminently true. I was, indeed, led to the happiness of my life by a perilous path. And, among the minor blessings of which I have been the recipient, thanks to a husband, whom my parents loved as a son, and of whom I have been ever proud, I have been blessed with an abundance of that, without which, in Eberhard's mistaken fancy, no home could be happy—wealth!"

Carl in due time married Charlotte, a presumptive heiress, and certainly a spoiled child. At the death of her father, however, which followed close on the heels of their marriage, it was found that the portion of the supposed heiress was next to nothing. Eberhard, therefore, found that he had been greatly deceived, and Charlotte, I fear, was not less so. In externals, she tried hard to keep up a show of elegance, but her elegance was always somewhat old-fashioned, and sometimes even shabby. Of the appearance of the inside of her house, and of her children, I know nothing, except from hearsay.

I have never spoken with Eberhard since we parted at the institute; if we chanced to meet in the street, it was he whose eyes turned away—mine now looked STRAIGHT!

## A TERRIBLE SUPERSTITION.

SUCH is the name which Mr. Baring-Gould aptly applies to the belief in were-wolves, which forms so strange a chapter in the history of human delusion. The idea of a person being transformed into a wolf, either to gratify a taste for human flesh, or in punishment by the gods for some great offence, has come down to us from ancient mythology. But the belief in such a creature, combining human intelligence with wolfish ferocity and demoniac strength, was especially strong and prevalent in the middle ages, though it is still cherished by peasants in secluded parts of Europe. It has undoubtedly been confirmed by the dreadful instances of homicidal insanity, sometimes accompanied by cannibalism, which reveal the bestial appetites and passions that dominate humanity in what we call abnormal conditions, but which *aspirants* tell us are only a recurrence to the primitive types of our race.

The story told by Ovid in his "*Metamorphoses*," of Lycaon, King of Arcadia, who, to test the omniscience of Jupiter, served up for him a dish of human flesh, and was punished by being transformed into a wolf, is one of many similar illustrations of this idea in classic fable. Mr. Cox, in his "*Mythology of the Aryan Nations*," maintains that the wide-spread superstition of lycanthropy, or wolf-madness, arose from the confusion of the word *lukos*, bright, applied to Jupiter, and *lukos*, the Greek name for wolf. But, though this theory illustrates by the myth of Lycaon the origin of the Arcadian legend, it fails, as Professor Fiske has shown, to explain all the features of the were-wolf superstition, or to account for its prevalence.

Doubtless the doctrine of metempsychosis, or the transmigration of the soul into the body of a brute, was the basis of the myth. There was a certain grim justice in the old idea that human beings assumed after death

the natures which their lives resembled; that, while the lofty soul was elevated to the condition of the Deity, the savage and blood-thirsty man was transformed into a wild beast, and drunkards and gluttons became swine. Thus primitive man invested the lower animals with his own characteristics, and, regarding the body as the mere garment of the soul, thought it might change its vesture even in this life. The class of creatures in whom he recognized his relatives were those represented by the *totem*, or symbol of his family or tribe. In the forces of Nature he discerned the influences of the bestial world, the storm-wind howling at night being a monstrous wolf ravening for prey, who yet was no earthly creature, but the personification of some tempestuous god.

But there was a basis of truth on which the were-wolf superstition rested. One element of it is seen in the celebrated "*Berserker rage*," a murderous frenzy, which at times possessed the old Norse freebooters. The craving for blood and rapine, stimulated by their ravages in sunnier climes, was developed at home into a strange homicidal madness. When the fit was on them, they would go forth at night, dressed in the skins of wolves and bears, and crush the skulls or cleave the backbones of belated travellers, whose blood they sometimes drank. In their frenzied excitement, they acquired superhuman strength and insensibility to pain, and, as they rushed about with glaring eyeballs, gnashing their teeth, foaming at the mouth and howling like wild beasts, it is not strange that the terrified peasantry should have regarded them as veritable were-wolves. Great exhaustion and nervous depression usually followed these attacks of frenzy, and which, according to the Norse historians, was extinguished by baptism. Verbal peculiarities assisted the growth of the were-wolf superstition—the word *vargr* signifying in Norse both a wolf and a godless man; and, as an *vilgah*, or outlaw, among the Anglo-Saxons, was said to have the head of a wolf, it is easy to see how the stories of outlaws, whom the law doomed to live like wild beasts, away from the haunts of men, should have been connected with accounts of their transformation into wolves.

The way in which these changes were said to have been effected, illustrates the curious character of the superstition in different countries. A Swedish tradition relates the adventures of a cottager named Lasse, who, having gone into the forest to fell a tree, neglected to cross himself and say his *Paternoster*. By this neglect, a *troll* was enabled to transform him into a wolf. His wife, who mourned his loss for many years, was told by a beggar-woman, to whom she had given a kind reception one Christmas-eve, that she would probably see her husband again, as he was not dead, but was roaming the forest as a wolf. As she was in her pantry that evening, laying aside a joint of meat for the next day's dinner, she saw a wolf standing with its paws on the window-sill, looking sorrowfully in at her. "Ah," said she, "if I knew that thou wert my husband, I would give thee a bone." At that instant the wolf-skin fell off, and her husband stood before her, in the same old clothes which he had on the day of his disap-

pearance. In this story we see the Christian view of the were-wolf as the creation of an evil spirit—the witchcraft delusion in its early stages. The saints were believed to have a power similar to that of their evil adversaries. Vereticus, King of Wales, was said to have been transformed into a wolf by St. Patrick, and another saint doomed the members of an illustrious family in Ireland to become wolves for seven years, prowling among the bogs and forests, uttering mournful howls, and devouring the peasants' sheep to allay their hunger.

The doubts of incredulous persons as to the possibility of such a transformation, were said to have been dispelled in one instance by the servant of a nobleman's wife in Livonia, who, to convince her of the truth, left the room, and, as she looked from the window, a wolf was seen running across the country. The dogs followed him, and, in the fight which ensued, tore out one of his eyes. Next day the slave appeared as usual before his mistress, but with only one eye. Though imprisoned in a lupine form, the unfortunate victims were believed to retain their human consciousness and even voices, and to yearn for an alleviation of their condition. John of Nuremberg relates that a priest, while travelling in a strange country, lost his way in a forest. Seeing a fire not far off, he went up to it, and was surprised to see a wolf seated over it. The wolf addressed him in a human voice, telling him not to be alarmed, for he was of the Assyrian race, a man and woman of which were doomed to spend a certain number of years in lupine form. At the end of seven years, if they lived so long, they could return home and resume their former shapes. He then entreated the priest to visit and console his sick wife, and administer the last sacraments to her. The priest hesitated at first about accompanying the wolf to his den, but consented on observing that he used his front paws as a human being does his hands. All doubts as to its true nature were removed when he saw the she-wolf peel off her wolf-skin, exhibiting the features of an aged woman.

The belief in these transformations in the middle ages derived a new and terrible significance from its connection with witchcraft. To the ancients the subjects of such metamorphoses were regarded with superstitious reverence. Divine natures were believed to assume earthly forms. But these mythological conceptions were degraded by the mediæval Christians into diabolical influences. The Church, jealous of miraculous powers exercised beyond its pale, denounced the were-wolf as a devil. Thus the person suspected of beast-metamorphosis ran the double risk of losing both his soul and his life, of being anathematized by the clergy, and then burnt at the stake. Ignorance of the phenomena of mental disease led to a belief that its victims were ministers of the Evil One, and even mere eccentricity was often fatal to its unfortunate possessor. These ideas were strengthened by some terrible instances of homicidal insanity, some of which were accompanied by cannibalism and lycanthropic, or were-wolf hallucinations, and were often ascribed to demoniac agency.

One of the most celebrated of these cases was that of Gilles de Laval, a distinguished nobleman of Brittany, in the early part of the fifteenth century, who, in reward for his brilliant military services, was made a marshal of France by Charles VII. After having distinguished himself in statesmanship and war, the trusted counsellor and friend of the king surprised every one by suddenly retiring from public life to his estates in the country. One of his principal residences was the Castle of Machecoul, a gloomy fortress, which was vigilantly guarded by his retainers. Strange stories were told in the surrounding country of dark deeds done within its sombre walls. No one except the servants had entered the castle and come out alive. Yet the marshal seemed deeply interested in religious observances, and the ceremonies in his gorgeous chapel were said to be very imposing. But at night, when the windows of the castle were lighted up, a fierce red glare was sometimes noticed in the casement high up in an isolated tower, from which heart-rending cries burst upon the stillness of the woods, and were answered, as the peasants said, by the howl of some hungry wolf.

The drawbridge of the fortress was lowered on certain days at fixed hours, when the servants of the Maréchal de Retz distributed clothes, money, and food, to a crowd of mendicants. Children were often among the beggars, and it was noticed that the servants tried to induce them to go into the kitchen for some promised dainty. Those who yielded to these solicitations were never seen again.

At last the indignation of the people burst forth. They charged the marshal with murdering their children and sacrificing them to the devil. These accusations were at first ridiculed by John V., Duke of Brittany, the kinsman of De Retz, who would have taken no serious notice of them had not an investigation been demanded by one of his nobles, and strongly urged by the Bishop of Nantes and the illustrious L'Hospital, grand-senechal of the ducal dominions. Thus importuned, the duke reluctantly signed a warrant for the arrest of Sire de Retz and his accomplices, which was presented at the gate of the castle by Jean Labbé, *sergent d'armes*, at the head of a band of twenty men selected for their pluck and daring. When summoned to surrender, the marshal, on learning that the leader of the troops was Labbé, turned pale, crossed himself, and declared it was impossible to resist Fate. It appeared that one of his astrologers had told him years before that he would one day pass into the hands of an abbé, and he had hitherto supposed that the prophecy signified he should become a monk.

Several of the marshal's associates escaped by flight, but two remained with him. On his way to Nantes, under guard of the duke's soldiers, an eager crowd assembled to view the cavalcade. They looked on in silence, till a woman's voice sadly cried, "My child! Restore my child!" when the thronging multitude uttered a wild howl, which followed the prisoner to the gates of the Château de Bouffay, where he was confined. The people of Nantes were very much excited,

and it was feared that the criminal would escape the punishment he deserved through the influence of the duke, his kinsman, and be only obliged to surrender some of his lands. But the Bishop of Nantes and the grand senechal were so persistent in their demand for a thorough investigation and a public trial that the duke at last consented, and appointed a commissioner to make the preliminary examination. He was instructed, however, to be as lenient as possible, and not allow the matter to be pressed. But the revelations made during the investigation were of such a character that it was impossible to gloss over or suppress them. Numerous witnesses testified that children had been enticed, under various pretences, into the castle, and had never afterward been seen. Some were led away by an old hag; others were inveigled by the armed retainers of the marshal. Pontou prevailed on the mother of one boy to let him go to Machecoul and be educated as a soldier, but two years had passed and no tidings of him had reached her. The number of these mysterious disappearances was too large to be accounted for on any theory consistent with the innocence of the accused. One witness deposed that the *valet* of Roger de Brigueville, an associate of the Sire de Retz, had told him he knew of a cask secreted in the castle, full of children's corpses.

Notwithstanding the overwhelming evidence against the marshal, which the commissioners presented to the duke, he still hesitated to proceed against him, when he was surprised to receive a letter from the accused confessing his crimes, but urging in extenuation of them his faithful attention to religious duties. After expressing repentance, the marshal supplicated permission to expiate his sins in the retirement of a monastery. He also indicated his intention of distributing his property among the poor. The letter, which was a strange medley of religious raving and insane cunning, was read by the duke to the President of Brittany and to the Bishop of Nantes, who were horrified at its tone, and protested that De Retz could not now be allowed to escape trial by the impious device that he suggested. They had, in the mean time, discovered numerous traces of human remains in the Castle of Machecoul, but were prevented from making a thorough examination by the persistent opposition of the duke. His hesitation to proceed against his kinsman, notwithstanding the advice of his principal officers, led the Bishop of Nantes to declare that, unless the case was brought into a secular court, he would summon the criminal to appear before an ecclesiastical tribunal. This resolution of the bishop obliged the duke to consent to a speedy trial by the civil authorities.

The marshal appeared in court dressed in white, with the exception of his gorgeous pourpoint, in token of his repentance. He did not look like a cruel man, but had rather a melancholy and phlegmatic expression of countenance. But a closer observation showed a nervous quivering of the mouth, spasmodic twitchings of the brows, and a strange and sinister appearance in the eyes. At times also he ground his teeth convulsively, his lips became contracted, and

again his eyes would appear fixed, sunken, and staring, and his complexion turn livid and cadaverous. These phenomena, which were ignorantly ascribed to demoniac agency, were symptomatic of a frenzy like that which attacked the old Norse freebooters.

The charges having been read, the prisoner resolutely denied being guilty of the atrocious crimes of which he was accused, and was remanded to prison. Henriët and Pontou, his retainers, then gave a minute account of the manner in which the children were murdered, and their remains disposed of. The marshal massacred them himself, with every variety of cruelty, and experienced intense pleasure in witnessing their agonies when tortured by his servants. After literally weltering in the blood of his victims, he was invariably seized with remorse, which, however, did not prevent him from continuing to gratify his dreadful cravings. He made one of his followers read to him accounts of the crimes of the most debased of the Roman emperors, as recorded by Suetonius and Tacitus, to stimulate his murderous passion, and said it gave him greater pleasure to hack off a child's head than to assist at a banquet. The bodies of the unfortunates were burned in the great fireplace in the chamber in which they were invariably murdered, and their ashes thrown into the moat. This testimony of his accomplices was confirmed by the circumstantial confession of the marshal, who, finding further evasion useless, acknowledged having committed about eight hundred murders in seven years.

All attempts to secure his pardon having failed, the Sire de Retz was executed in conformity with the sentence of the ecclesiastical tribunal, ratified by the secular court which had first tried him. He and his accomplices, Henriët and Pontou, were hung over piles of fagots, tar, and brushwood, the flames of which enveloped their swinging bodies, on the 26th of October, 1440, in the presence of a vast concourse of spectators. He exhibited on the scaffold the same outward manifestations of religious feeling which had characterized his conduct during the trial, and made an address to his accomplices and the crowd, expressive of his contrition, and hope of eternal glory. While the ashes of Henriët and Pontou were cast to the winds, the body of the marshal was removed, before the fire had consumed it, to the Carmelite monastery of Nantes, where his obsequies were celebrated with great pomp. The facts of the case have been set forth in the histories of Michelet and Martin, as well as in the work of Mr. Baring-Gould.

In the mania of De Retz, the propensity to murder was not accompanied by cannibalism. But there were numerous instances in the middle ages in which these cravings were combined. Such was the case of a tailor of Chalons, who was sentenced by the Parliament of Paris, in 1598, to be burned alive for lycanthropy. He used to decoy children into his shop, or waylay them in the woods at dusk. After tearing them with his teeth and killing them, he dressed their flesh like ordinary meat, and devoured it with great relish. A caak full of bones was found in his house, but the number of his victims is unknown.

Frequently the murderer and cannibal was the victim of hallucination, as well as of an insane appetite, and believed himself to be transformed into a wolf. This delusion existed in the case of Peter Burgot, a shepherd of Besançon, who, having lost his sheep in a storm, recovered them, as he thought, by the aid of the devil, whom he agreed to serve, and was transformed into a wolf by being smeared with a salve. He confessed that he and his companion, one Michel Verdung, used to make were-wolf runs through the country, killing and often eating the children, and even grown people, whom they met. On one of these raids, a boy whom he attacked screamed so loud that he was obliged to return to his clothes, and smear himself again, in order to assume his human form and escape detection.

It was seldom that the true condition of these victims of mental disease was even dimly appreciated by their judges, although death may have been more merciful than confinement in the mad-houses of those days. Yet Jacques Roulet, after being tried and sentenced to death by a criminal court, had his punishment commuted by the Parliament at Paris to two years' imprisonment in one of these institutions, in order, as the decree recited, that he might be instructed in the knowledge of God, whom he had forgotten in his extreme poverty.

He was a wretched beggar, whose idiotic mind was completely mastered by a cannibal appetite. The first knowledge of his depraved taste was obtained by some countrymen, who, while passing a wild and lonely spot near Caude, found the bloody and mutilated corpse of a boy of fifteen. On their approach, two wolves, which had been rending the body, ran into the thicket. While following their bloody tracks, the men came upon a half-naked man crouching among the bushes. His hair and beard were long and straggling, and his nails, which were the length of claws, were clotted with flesh, blood, and shreds of human flesh. Roulet (for it was the beggar) freely acknowledged that he had smothered the lad to death, and would have devoured the body completely had it not been for the arrival of the men. The wretched man proved to be miserably poor, and had been lodged, out of charity, in a neighboring village, from which he was absent eight days before his apprehension. He told the judges, at the trial, that he transformed himself into a wolf by using some ointment which his parents had given him, and said that the wolves, which had been seen leaving the corpse, were his cousin and his brother, his companions in mendicancy. It was proved, however, that they were away at the time. There is no doubt that Roulet killed and ate the child, as he had done several others, in the belief that he was a wolf; and his subsequent appearance and actions showed the low stage of his intellectual and moral development.

Another case of cannibalism and were-wolf hallucination was that of Jean Grenier. A party of village girls, in the south of France, while chatting merrily together, noticed that the sheep which they were tending suddenly took fright, while, at the same time, one of the dogs growled savagely. On seeking the cause of the disturbance, the girls dis-

covered a strange-looking boy, about thirteen years old, sitting on a fir-log in a little hollow near by. He had red hair, thickly matted, which hung over his shoulders and covered his narrow forehead; sunken eyes, that glared with mingled ferocity and cunning, and a dark, olive complexion. His large, brutal-looking jaws projected forward, and his strong canine teeth protruded beyond the lower lip when the mouth was closed. The tattered clothes that he wore showed his abject poverty, and revealed also the emaciation of his limbs. As the girls stood around him, he frightened them terribly by saying that he was a were-wolf, who had eaten many a maiden, and would devour one of them at sundown. Terrified by his dreadful stories and threats, even more than by his horrible appearance, his ghastly leers and howls of merriment, the girls soon ran away from him.

Not long afterward, a little girl of thirteen, who had been in the habit of tending sheep with Jean Grenier, who had often frightened her with his were-wolf stories, came home without her flock, and in great alarm. She told her parents that she had been attacked by a creature resembling a wolf, with red hair; its head smaller and its body shorter and stouter than that of this animal. By a vigorous use of her shepherd-staff she succeeded in beating the creature off, and fled home. As several children had mysteriously disappeared of late, suspicion fell upon Jean Grenier as the assailant whom the excited fancy of the little girl had turned into a wolf. Being brought before the Parliament of Bordeaux, he stated that, two or three years ago, he had been introduced to the devil in the depths of the forest, who made a compact with him, and presented him with a salve and a wolf-skin. Since then he had roamed about the country as a wolf after dark, resuming his human shape by daylight. The account of the number of children he had killed corresponded with the evidence of their parents, and it was proved that he had eaten the bodies of his victims. On one occasion he took advantage of the absence of the family to enter a house and drag a baby from its cradle. At another time he was only prevented from killing a little boy by the interference of a man, who, on being examined, confirmed the truth of his confession. Though Grenier himself undoubtedly believed that he was transformed into a wolf, the only witness who corroborated his statement in this respect was the little girl who used to tend sheep with him. It is to the credit of the court that they rejected the popular superstition, and, instead of punishing the wretched boy as an agent of the devil, pronounced him an imbecile, who was irresponsible for his acts; lycanthropy being a mere hallucination, its victim was not a proper subject for the criminal law. Grenier was sentenced to perpetual imprisonment in a monastery at Bordeaux, so that he might receive moral and religious instruction. The monks could hardly have welcomed him as a promising pupil, for, on his arrival, he ran frantically about the cloister and garden on all-fours, and devoured with eagerness a heap of offal which he found there. Seven years afterward he was visited by the celebrated expert on insanity, Delan-



ere, who found him very shy and unwilling to look any one in the face. This *savant* noted his deep-set, restless eyes, long and protruding teeth, and feeble mind. Grenier told him his story, which coincided with his former statements, and said he still felt a craving for raw flesh, preferring that of little girls, which he considered delicious, and, were it not for his confinement, should taste again. He died soon after Delancro's visit, at the age of twenty.

These examples of murderous mania and cannibalism in by-gone ages are sufficiently horrible to read about, but they lack the fearful interest which invests similar horrors in more recent days. In the year 1849, at the little hamlet of Polomyja, in Austrian Galicia, surrounded by great forests of pine, a white-bearded, venerable man sat at the door of a rude church asking alms from the poor wood-cutters who make up the population. The beggar, whose name was Swiatek, eked out his subsistence by the charity of the kind-hearted villagers and the sale of small pinchbeck ornaments and beads. One Sunday after church, as he was eating a crust of bread and some meat in the hut of a hospitable Mazurd, his attention was attracted by a bright little girl of nine or ten, who was playing with several other children. He gave her a ring with a piece of colored glass set in it, which delighted the child, and told her he found it under a big fir near the churchyard, where, if she went alone, she would find others among the tree-roots. Soon after the children scampered off into the wood, the old beggar left the house, thanking his host for their hospitality. The bright little girl, an orphan whom they had adopted, was never seen again.

Some time afterward, as some children were returning home from school, they saw one of their companions, a little boy, talking with a man among the pine-trees. They called to him to go along with them, but, after waiting till they were tired, went back without him. He was never seen again. Not a great while later a servant-girl disappeared from a village about five miles from Polomyja. She had been sent to a cottage among the woods with some groceries, and, at nightfall, her master and some of his neighbors went in search of her. They traced her footsteps where they left the beaten track, among the thick woods, with those of another person, on the powdered snow, but lost sight of them under the clustering pines. Next morning a heavy fall of snow had obliterated all traces of the missing girl. She, too, was never seen again.

In the winter of 1849 a little boy, who had been sent to a well to draw water, suddenly disappeared, but his pitcher was found at the curb. As the wolves were supposed to be particularly ravenous at this time, these mysterious disappearances of children were charged to them, and several were killed by the exasperated villagers. But, in May, 1849, the terrible secret leaked out. The innkeeper of Polomyja, having missed a couple of ducks, suspected the old beggar Swiatek to be the thief. To satisfy himself, he determined to visit the mendicant's cottage. The fragrance of roast meat which greeted his

nostrils as he approached, confirmed his suspicions. As he threw open the door he saw the beggar hide something under his long clothes. The innkeeper at once seized Swiatek by the throat and charged him with the theft, when, to his horror, he saw the head of a girl of fourteen drop from beneath the pauper's clothes.

On the arrival of the neighbors soon afterward, the old beggar, his wife, his daughter, aged sixteen, and his son, a boy of five, were locked up. The hut was then thoroughly examined, and the mutilated remains of the poor girl discovered, part being partially cooked. At his trial, Swiatek stated that he had killed six persons, who had been eaten by himself and family. His children, however, asserted that the number was much larger. Their testimony was confirmed by the discovery, in his house, of the remains of fourteen different suits of clothes. It appeared that Swiatek's first indulgence in human flesh was in 1846, when he found, amid the charred ruins of a Jewish tavern, the half-roasted corpse of its proprietor, who had perished in the flames. The half-starved beggar could not resist the desire to taste of it, and, having done so, the unnatural craving impelled him to gratify his depraved appetite by murder. Such was the indignation against him, that it was feared he would be torn in pieces by the populace when he was brought to trial, but precautions to insure his safety were rendered needless by his hanging himself the first night of his confinement from the bars of the prison-window.

About the time that these atrocities were brought to light, the perpetrator of outrages of a hardly less revolting character was discovered in Paris. His victims, however, were not among the living, but the dead. He was not a were-wolf, but a human hyena. This person, whose experience shows that the stories of ghouls in Oriental romance had a foundation in fact, was sometimes seized with an irresistible desire to enter cemeteries and rifle new-made graves. He proved to be a French officer, named Bertrand. With retiring habits, and feminine delicacy and refinement, he was beloved by his comrades for his generous and cheerful qualities, but was nevertheless subject to fits of depression. The mania which resulted in his graveyard spoiliations, was originally caused by over-indulgence in wine. He was tried by court-martial, and sentenced to a year's imprisonment.

It is a pleasant thought that the were-wolf has ceased to prey on the lives of men, that the light of science has dispelled the gloomy superstition which doomed so many monomaniacs to the stake. But it may well moderate our pride in the nobility of human nature to reflect that the terrible outbursts of homicidal insanity, which people our lunatic asylums, are often due to a neglect of moral restraint in natures not naturally depraved. The Marshal de Retz stimulated his murderous desires by gloating over the atrocities of the Roman emperors, whose cruelties were intensified by the horrors of the gladiatorial shows. The demoniac passions of the human hyena, Bertrand, were excited by excesses in drink. Even the most petty

covetousness has sometimes led to the perpetration of fearful crimes. In 1862 a pauper named Dumollard was guillotined in France for the murder of six poor village-girls, having attempted to kill several others. He did not have a special relish for blood, but assassinated his victims solely for the sake of their garments. The dread of the criminal law keeps many persons from indulging their passions who in former ages could have gratified them with impunity. There is no more important duty for our reformers than to take care that vice and ignorance do not produce those were-wolves of modern civilization who gnash their teeth and glare at us from behind prison-bars or the grated windows of lunatic asylums.

ALEXANDER YOUNG.

## IN THE COAL-REGIONS OF THE SCHUYLKILL.

SEVENTEEN hundred feet above the level of the sea, in a narrow gorge, where the Schuylkill River breaks through Sharp Mountain, is the village of Mount Carbon. The river, the track of the Reading Railroad, and a carriage-way, occupy the centre of the gorge. The houses of the villagers are perched wherever these thoroughfares have left room to build them. At the base and close against the face of the western mountain-peak is the Mansion House, the one hotel in the village, the property of the Philadelphia and Reading Railroad Company, kept as a place of summer resort. Sitting on the wide piazza of this old-style country-inn, and looking northward, we see Pottsville, lying just above the gorge, at a distance of less than one mile up the valley. Immediately in front of the house, across the river, are the fine residences of the wealthy manufacturers and successful coal operators, resting on the mountain-slope. Southward, between the abruptly-rising hills, the view is clear for the distance of nearly a mile, where a tall peak looms up in the centre of the valley, forcing the river in a sharp curve eastward, thus contributing greatly to the wild grandeur and weird beauty of the scene. Behind, rising almost perpendicularly, the mountain shuts us in completely, and we look up into a wilderness of beautiful promise. From the third story of the hotel, by crossing a short wooden bridge, the entrance to a terraced mountain-garden is reached, crowded with flowers and shrubbery, luxuriant beneath great forest-trees. Here is a delightful retreat, wherein, in utter forgetfulness of the harsh realities of the perpetual life-struggle, to dream away a summer's day in enjoyable ease. This we make our headquarters while rambling through the mountains and coal-fields of the Schuylkill region.

The superintendent of that part of the Philadelphia and Reading Railroad lying in the coal-fields, having placed himself and the private car of the company's officers at our disposal, he was installed guide for the occasion; and we gave ourselves up to his care, to go whither he would lead us. This is the perfection of railroad travelling—a tiny car, built on the boiler of a diminutive engine, as

cosey and comfortable as sofas and easy-chairs can make it, the plate-glass sides of the car affording a perfect view of the scenery, and the superintendent of the road thoroughly acquainted with the country, its beauties and resources. Pleasure and knowledge, most happily combined, are here tendered for our use and enjoyment.

Thus provided and attended, early in the day we start on our journey.

Passing round Pottsville under the shadow of the mountain, leaving the village to the west, then through Port Carbon and across the Schuylkill, we glide up the mountain-grade as easily and smoothly as a boat over calm waters. No smoke from the engine, not a particle of dust to detract from our enjoyment, but, in their stead, the delightful mountain-air lapping us in waves of freshness, and coming to us in whirls of fragrance from the forests.

As we go up, mountains rise above mountains, and stretch away in the distance until, kissed by the clouds, they are merged into the blue of the heavens. Massive ledges of rock, cropping out, force the road into short curves; and our little engine sweeps round and up, now on the edge of a precipice the sight of which makes one catch his breath for very fear, and anon through narrow passages between high walls of massive rock, then out into the light and through the mazes of the wood, still up and up. As we look above us, shadows lie on the mountains, drifting about as clouds driven by the wind, whose image they are; and the woods look stern and dark. And, when we look down, mountains lie below us, and we see the upper surface of the forests—the shining green of the hemlock mingling with the darker shades of the pines, their branches waving in the sunlight—tossing about as if beckoning us to their embrace. As we look, the longing comes to spring down those giddy heights into that emerald sea, to be buoyed up and tossed lightly about by those graceful arms, and then to sink lower still until we feel the spray of fairy fountains, and are laved by the waters of cool grottoes hidden in those deep, moss-draped and vine-covered recesses below.

So we sit dreaming until interrupted by the sound of the rapid, puffing stroke of the engine, and the announcement that we are ascending Broad Mountain on a grade of one hundred and seventy-six feet to a mile. We steam along past wooded glens and deep ravines, or stop to admire some wild gorge, down which sparkling streams madly rush and leap, shining and disappearing until they glide calmly away in the distance, or, springing from a mountain-ledge, are lost to us. Rocks hang in frowning grandeur from the steep sides of these gorges; or, covered with mosses—vines trailing over and dropping in festoons from them, and seemingly upheld by gnarled and twisted trees—they hang there, monuments of beauty. Still we go up. Clumps of laurel and masses of fern skirt the way; while the beautiful golden rod, in full bloom, bends graciously toward us, and the crimson blossoms of the sumac gleam like flame as we are whirled along.

Now we are on the summit of Broad Mountain. This summit, five miles in width,

is a vast swamp, a magnificent fern-brake. Here mosses in the greatest profusion, and ferns—from the most stately varieties, reaching to the height of three or four feet, down to the tiny spray clinging in the moist crevices of the embedded bowlders—cover and hide the swamps under a cloud of beauty. Stretching out on all sides are views grandly picturesque—mountains and valleys, deep ravines and dark glens, repeating themselves and still extending, until, in utter despair, we cease trying to understand localities, and give ourselves up to enjoyment.

Leaving the car and facing about, we look down the lovely valley of the Mahanoy, lying in quiet beauty at our feet. As far as the eye can reach, hills, receding, open a way for the lazily-winding river that gives outlet to the valley.

Returning to the track and walking forward, we approach what appears to be the earth's end—the “jumping-off place,” in which we firmly believed in our childhood, and have been all these years in finding. Going to the edge, we see the track continues down, and that our jumping-off place is an inclined plane, used for raising and lowering coal-cars. Down this we must go, but are first taken underground to examine the machinery in the “Plane House.” We listen with all due gravity and commendable patience while the gentlemen explain the use and weight of the huge wheels and the power of twenty-four boilers, suggestive to us of nothing but explosions, and grow inquisitive only while watching a man who stands alert, waiting for a signal which, when given, he obeys by moving backward or forward the lever or pendulum on which his hand rests; then the wheels revolve, and overhead rumble the cars as they are drawn up or let down. What if he failed to obey the signal, or started too hastily? Slowly and reluctantly we prepare to descend, our proposal to walk down—we should willingly have gone on all-fours—being greeted with smiles, we submitted to Fate, i. e., the man at the lever, drew a long breath, and down we went. Our equanimity was soon restored, and we reached the foot and saw the “Barney” drop underground with just a little regret that our fears had been groundless after all, and that we could not have a woman's satisfaction of saying “I told you so.” Passing through a pretty village—“Foot of the Plane”—we ran on to Girardville, two miles farther. This town is built on a tract of land presented to the city of Philadelphia by Stephen Girard, and designated by him as the site of a town “which would be at some future day a place of consequence.”

Here we first caught sight of the old Girard road—a railroad built in 1832, on a system of levels, since discarded for steep grades and planes. It now makes an excellent carriage-road. This is literally a valley of mines—collieries on every side. As we go onward, long trains of cars, loaded with coal, drag slowly past. These trains, consisting of from one hundred and fifty to two hundred cars, are drawn by powerful engines, compared with which the ordinary locomotives for passenger service are pigmies. Huge masses of pudding-stone, the under strata of coal-veins,

lie about as they have been thrown from the mines in tunnelling, or rolled down the mountains in the days of the Creation. Mounds of coal-waste disfigure the scenery, obtruding in ugly blackness upon the miners' villages, and bidding fair to rival the hills in height. It is an absolute necessity that some method of utilizing this coal-waste be devised. Fifteen per cent. is given as the lowest estimate of the waste of the mines, which entails a loss of one and a half million on a business of ten million tons per annum. The amount of waste that now rises in unsightly mounds is estimated at sixteen million tons, and this is increasing yearly. Methods of pressing it into brick and using it as fuel have been tried, without success; there is no doubt expressed as to its being an excellent article, but the expense of manufacturing it, or putting it into shape for transportation, is greater than its value in practical use.

Miners' villages are clustered about the mines; the houses, built of unpainted boards, are black or gray, according to age, the original color of the wood being soon hidden under a coating of coal-dust. All have gardens attached, in which cabbages and potatoes struggle with weeds for the mastery. Sun-flowers and dahlias bloom in the corners of the fences, while sickly-looking morning-glories catch and climb, or trail unaided to the ground. Pigs, goats, and chickens, constitute the live-stock, and use the front-door promiscuously with the family, giving them quite an air of proprietorship. One house was pointed out to us in which the cow-stable and pigsty opened into the family kitchen; and this was not cited as being any thing unusual. To this general style of living there are some notable exceptions. The village of Oakdale is a good specimen of comfort; it is inhabited exclusively by English and Welsh, and, from the shining glass of the windows to the trim gardens, every thing betokens neatness and thrift. We were told of a colony of Hollanders, who retain all the quaint old customs of their native land. The men work in the mines, while the women till the soil, doing all the work on their farms. They are described as thrifty and industrious—their village a model of cleanliness and prosperity.

Going as far as Shamokin, in the middle anthracite field, we retraced our way to Alaska, a new possession of the railway company, consisting of a neat little house and a switch-tender, in the midst of an otherwise unbroken forest; then through Locustdale to Ashland, for dinner. Our party was here increased by the addition of two coal operators, and we started to visit a “breaker.” These “breakers,” in ugliness, compare unfavorably with the waste-heaps; they are dirty, dilapidated, tumble-down-looking structures, the shape and manner of construction all aiding this effect. Imagine a little cabin built on a steep slope of a mountain, and, extending from the cabin to the base of the mountain, a long, covered, irregularly-formed wooden chute, supported by trestles, and looking as if the first breeze would scatter the timbers. Our surprise was great on hearing that the cost of erecting one of these buildings is from thirty to forty thousand dollars. If the opening of the mine is as high as the top of the breaker, a little

trestle-work bridge connects the two over which the coal-cars pass, receiving the coal in the mine and carrying it to the breaker. Others, like the one we visited, have the opening of the mine below, and the cars are elevated by machinery on an inclined plane to the proper height. All the warnings of dirt—and they were many—did not deter us from entering the breaker. Climbing a pair of steps, like "chicken-stairs," on the outside of the shute, we entered a door at the side, and found ourselves in a most terrific din, blinding dust and flying coal, and, passing to and fro, were grim black figures with eyes preternaturally large, glaring at us through shifting black clouds, while below were little imps grinning and chattering as they hopped like monkeys from side to side. Keeping still until we regained self-possession, we started cautiously forward over loose planks, lying at just the right angle to make people nervous without breaking their necks, and up shaky stairs that, like the mythical rocks, eternally threaten, but never fall, to examine the interior of this wonderful structure. As we saw more clearly through the dust, our goblins turned into men busily engaged in attending the rollers, and the imps were small boys, evidently well pleased and astonished to see a lady in their midst, but all blackened to unrecognizability. The machinery is in the little cabin, and we ascend by stairs to the different floors. At the top a shute receives the coal from the mines. Here the large steamboat and lump coal is picked out and thrown aside into a separate trough, which carries it to the foot of the breaker. The remaining coal descends into revolving rollers, furnished with steel or wrought-iron teeth, which break the lumps and discharge them into revolving screens covered with wire-net, divided into compartments of different-sized meshes. Under each of these divisions is a shute into which the coal falls, thus separating the sizes. Boys attend these, picking out slate from the coal, after which it is ready for transportation. Then the wickets at the ends are raised, and the coal falls into cars underneath to receive it.

Descending to the foot of the breaker, we were but a few yards from the opening of the mine, and, as we walked toward it, we could see vapor issuing from the drift, which marked a difference of temperature between the surface and the subterranean atmosphere. The miners believe this vapor to be a specific for measles, and their wives faithfully carry the little ones afflicted with this disease to inhale it. The warning chills we experienced caused us to retreat, with doubts as to the efficacy of the treatment.

Reëntering the car after a short run, we entered the Mahanoy Valley, going toward Tamaqua, and are in the midst of the beautiful scene we viewed from the summit of Broad Mountain. Hundreds of feet above us is the point on which we stood, with the wild ravine below it. Mountains extend on either side, peak after peak, and then a long plateau, with an occasional break, through which we catch a glimpse of points rising still higher in the distance, lying like great banks of cloud against the sky. The beginning of a new settlement by the road-side, gives us an idea

of frontier life: half a dozen houses in the midst of a wilderness, in which the axe, impelled by sturdy arms, is making inroads. Fallen trees and rough stumps surround the rude buildings, while children, goats, and pigs, already at home, climb and scramble and tumble together over the "clearing." Higher up on the mountain a breaker is visible, in shining newness, standing as a cause for the village before us, and promising support to the families that shall inhabit it. As we run along, the whistle of our little engine is sufficient to clear the track of every thing but animals. Cars and locomotives switch off on sidings until we pass, but animals, those things with instinct, doggedly persist in running in front of us, crossing and recrossing the track in the most tantalizing manner. All the cows and pigs of the neighborhood seem to have chosen this particular day, and this particular track, for their perambulations, and appear fully to appreciate the never-failing good-nature of our engineer. Though this is not a branch of his road, it is evident he has passed over it often enough to have become well known. The pigs answer his whistle with a grunt, and the cows shake their heads knowingly, then kick up their heels and trot a few feet in advance, to our intense amusement. One poor cow lies dead beside the track, a victim of her own stupidity, and the wrath of a preceding engineer. Getting rid of our escorts, we steam along rapidly to Mahanoy City, which city extends in a line indefinitely down the valley, and, like all the other towns of this region, is made up principally of coal-dust and wooden houses fenced in by mountains. The mountains being the more attractive objects, we turn to them. High up to our left, and overlooking the town, a tree stands out from the rest like a sentinel, while a single branch, turned crimson, gives color to the scene, and to us a foretaste of the beautiful October scenery of these hills.

The absence of timber is seriously felt in this region of forests. Though the mountains are covered from foot to crest with dense growth, the timber is rapidly disappearing; most of the original growth has already been used in the mines. Even after having explained to us the great consumption of timber in mining operations, it is impossible to realize how thousands of acres could be destroyed in half a century. It is but fifty-eight years ago that Colonel Shoemaker, after patient perseverance, succeeded in mining a small quantity of coal, ten wagon-loads of which he sent to Philadelphia. After many ineffectual efforts, he at last disposed of part of it, only to be denounced as an arrant cheat and swindler, for having imposed on the people by selling them black stones dug from these mountains.

Coming back to the present, Mahanoy City is behind us, and we are now entering the great tunnel, thirty-seven hundred feet long. The track stretches straight before us on an upward grade, while a glimmer of light in the distance marks the end of the passage under the mountain. Straining our eyes, we discover what appear to be rays of light shooting through the dark opening; these, upon inspection, prove to be the iron rails, whose surface, bright from use, reflects the light for

many yards from the opening. A few feet from the entrance, the reflection of light thrown from the engine-lamp, gives to the arch the appearance of colored ivory—the tints mingling and rearranging, again separating, glancing and changing in beautiful confusion. As we advance farther, the ivory changes into blocks of dull marble and masses of jagged white stone, icicles hang from the roof, and the atmosphere is like that of an ice-cave. We are thoroughly chilled long before reaching the end, and are heartily glad to emerge into light and warmth.

We arrive at Tamaqua late in the afternoon. After a short delay, the car is swung round on a "turn-table" on to Schuylkill Valley road, and leading to Mount Carbon. Running along the foot of Sharp Mountain to the left, is Locust Mountain, and under our feet the deep beds of the eastern division of the coal-field. It is evening, and we meet miners singly and in groups returning from their labor. With queer little lamps fastened to their hat-fronts, oil-cans slung across their shoulders, and dinner-kettles in hand, these black figures trudge wearily homeward. Wet and dirty, with pants tucked into boots, all soaked with the black dampness of the mine, they have cheerful smiles for us in spite of their discomfort. Little boys, whose lamps show that they, too, enter the bowels of the earth, others black and begrimed—the outside workers—run and jump, and shout, glad of their release. Raising their little black, happy faces, they cheer us as we pass, and I feel like gathering them all in and giving them a glorious ride down the mountain. The head-waters of the Schuylkill lie at our feet—a stream so tiny, a few yards from its source, that a child could step across it. Following its course westward, we pass Tuscarora, Middleport, and New Philadelphia—an undulating valley of cultivated farms to our right, and ever-varying mountain scenery on our left—we reach Mount Carbon, and rest after a bright day of pure enjoyment.

On the second day we viewed from a carriage scenes not accessible by rail, driving first to Pottsville, where elegant mansions dot the mountain-slopes, and furnaces, iron-mills, and factories, cluster low in the valley on the banks of the river, while underneath lies the largest basin of anthracite found in America. From this village we ascend the mountain to the south by a good carriage-road, and are soon high above the bend of the river and the villages on its banks. We look down on Mount Carbon, the Mansion House, with its beautiful garden and park, pointing out one fair scene after another, until they are gradually lost among the tree-tops as we ascend. There are farms well cleared and under good cultivation. Fields of clover, in a sea of bloom, distil sweet perfume, while from the wood, filled with whortleberries, a faint, delicious fragrance greets us such as we never met before. Nothing breaks the stillness but the sighing of the pines swept by mountain-breezes, and the humming of bees in the clover. Far below is the Schuylkill, winding through fertile valleys, then lost in narrow gorges, and again appearing in the distance. Busy towns and villages, mansions and farms, line its



banks, and over all is stamped the impress of prosperity.

To the southeast rise three tall peaks, called, in the local vernacular, *Gobbleberghs*. We descend, and pass through a charming glen between these towering points. The road follows the course of a mountain-stream, that sparkles and dances along in the sunshine. Over pebbles and under huge boulders it winds merrily, now hidden from view by the dense underbrush, and again flashing bright glances through the openings: here spanned by a tree that has fallen across it, and now lying in deep pools under overhanging branches, it mirrors a quiet beauty. Cows stand lazily in these shadows, and geese and ducks, from the farms near by, float silently in the eddies. So we ride on, each scene fairer to us than the last, until we are perfectly bewildered by Nature's loveliness. Again we ascend, leaving the little brook many yards below; but we watch its course by the openings in the tree-tops, that mark its way; at last, even that disappears, and we turn away with regret, feeling that a pleasant companion has been lost to us. We have been climbing Second Mountain, and are now on the summit. Behind us is Sharp Mountain, over which we passed, and between that and us are the *Gobbleberghs* and the little glen; we look for a farewell glimpse of the stream, but that is denied us by the envious leaves. To the south is Long Run Valley, which attracts us by its peculiar formation. On both slopes of the valley, for its whole length of twenty-four miles, the surface is raised in regular billows, which can be compared to nothing but the undulations of the sea; we can almost imagine it rising and falling like ocean-waves. One of the party suggested that these are the graves of an army of giants, and called up some learned quotations from the classics to support his theory; these, however, were not listened to, and so he drifted with the tide, declaring he could hear the noise of the surf. The valley is under fine cultivation; the effect of a high wind sweeping over these waves when covered with ripened grain, with its ever-changing lights and shadows, is exceedingly beautiful. To reach this valley, we descend the mountain-side by a winding road, lined thickly with trees on either side, their interlocking branches forming a natural archway, under which green canopy we pass, cooled by the perpetual shade. No sky is visible—we are enclosed in a wilderness of verdure, while the singing of birds, and the fragrant breath of the pines, mingle with that delicate humming of insects, heard only in the deep silence of the forests, until our senses are lulled into rest, and we distinguish no separate feeling—a calm delight pervades us. Driving out from our leafy way, and across Long Run Valley to the foot of the Schuylkill Mountain, we ascend. This mountain, from base to summit, is under cultivation. Well-tilled farms, with scattered clumps and groves of trees, remnants of the old forest, line the road. Large barns and snug cattle-stalls betoken the thrifty farmer, and here are the walnut, hickory, cherry, elm, and other trees, nourished only by a rich soil, which we missed on the coal-

bearing mountains. We look down the slopes, over fields of corn, with ears filling and swelling in the sun, and on harvest-fields, where the reaper has left nothing but a short brown stubble to tell of his garnered wealth. Far away to the southeast, across a wide rich valley, are the Blue Ridge Mountains, the dividing line between Berks and Schuylkill Counties, and in all other directions chain after chain of mountains, extending as far as the eye can reach, with valleys and gorges—busy towns and growing villages nestling in cosy comfort close under the shadow of the hills. As we slowly descend, the noise of the carriage starts into activity myriads of grasshoppers from their retreat in the fence-corners, and they hop, jump, and fly, tumbling over each other, performing the queerest of acrobatic feats, which we applaud by making the old hills ring with our laughter. Happy as children we ride on, looking for new beauties, and finding them. Squirrels and dear little striped "chipmunks" skip over fallen trees, and run along the rails of the old, half-decayed fences, and, as they follow the sharp turnings, the rich brown colors of their fur light and change with all the tints of autumn leaves.

Now, turning sharply to the left, we leave on our right, across a deep, wild ravine, a grand mountain-peak, rising abruptly from the forest beneath, its towering crest crowned thickly with pines, frowning down on the valley of the Schuylkill in solemn grandeur. There are no clearings, no roads; it seems an unexplored wilderness. Our road lies along the edge of a steep precipice, and we turn from the mountain to look down into a tangle of laurel, hemlock, and fern, through which we anon catch the gleam of water far below. On the rocky slope above us, and overhanging the road, is a deep, dark, impenetrable forest of pine. At the foot of the mountain is Schuylkill Haven, now the principal shipping-port of the coal-trade. It has canal-basins and wharves, coal-cars and canal-boats, in indefinite numbers. With all its bustle and trade, it is a pretty village. An excellent road, following the course of the Schuylkill, through narrow mountain-passes, a distance of three miles, brings us to Mount Carbon.

After an hour's rest, we are again in the little car "Gem," for one more run up the mountains. We take the Mine-Hill road through Cressona and Minersville, passing over the widest part of the coal-fields. A column of smoke rises from among the trees on the mountain, issuing from a mine that has been burning for thirty years. Farther on, a vein of pure anthracite crops out, and is being worked on the surface. We stop to examine it, then ride on, listening to tales of mine-life and miners' strikes as we wind in and out among the hills.

"Would you like a storm on the mountains? We must display all our attractions; and see! it is raining now on the crest of that hill."

We look out to see the storm rapidly moving to meet us as we advance, and grow quiet amid the awful stillness of Nature. The black clouds shift, marching and counter-marching like the solid masses of a vast

army, until they completely encircle us, while the mutterings of distant thunder draw near and still nearer. Trees bend and creak, as if in terror, and then rise expectant. Now it is upon us, the thunder crashing and rolling over and under us, while the surrounding hills echo and reëcho the sound, until it is thrown back fainter and fainter, dying away in the distance in rumbling reverberations; then, gathering fresh force, breaks in one continuous roar, making the earth beneath us tremble, while lightning darts, in blinding flashes, from the darkness that surrounds us. The rain pours down in torrents, beating against the closed windows of the car with an uncontrollable rage, and we sit quietly watching the engine, not attempting to advance until the storm shall have passed over. Now its fury is spent; we hail with delight the first break in the clouds, and, as they move past in slow, majestic grandeur, we raise first one window, then another, until all the sides are thrown open, letting in the pure, bracing air from the storm-washed mountains.

The branches of the trees droop with the weight of rain; and the gusts of wind, following in the wake of the retreating storm, seize and shake them merrily, sending down showers of drops, that are blown through the windows, sprinkling us with liquid diamonds. Deep gulches are washed in the mountain-sides. Tiny streams, of an hour before, are now turbulent rivers, plunging madly over rocky beds to the valleys below. Every thing is changed, fresh, and delightful, filling us with new vitality. The engine, which yesterday whirled us along with almost fearful rapidity, to-day is too slow. We want to spring out and lead it a race up these hills. We would reach that summit, and play hide-and-seek among those grim sentinel firs in spite of their darkness—peep into dark caverns, awaking the echoes, and then splash through the swollen streams, and wait under the trees to receive their showers. We would search for pine-burrs and green cones with which to build houses beneath sheltering rocks; and, after we had shouted and romped to exhaustion, swing in the hammock that wild-vine makes, until sleep steals away our childish fancies, and we awake into the sober reality of life.

We will not look at the mines and coal-heaps to-day, being determined to carry away with us a memory of naught but the beautiful. So we go up to the highest point to take our farewell of the country. Close to us, toward the south, is Second Mountain, then Sharp, then Schuylkill; and away, far away, the Blue Mountains, like a wave, touch the horizon. Over all the hills shadows sweep, such as are born only of the clouds and storm, and the valleys are screened by a curtain of mist. We are bathed in glorious sunlight, and we watch it driving the clouds before it, as, expanding, it steals nearer the distant mountains, flooding one peak and then another with golden light. In the midst of these scenes we linger until, forced by inexorable Time, we turn reluctantly away.

The engineer comes from a thicket laden with branches of the blueberry, filled with

ripe fruit, and all glistening with the rain just shaken from them. Does he know, we wonder, that we never saw berries to which the bloom of freshness still clung? We bury our faces in the cool, moist leaves, and crush the purple pulp, enjoying the fragrance quite as much as the fruit, while we try to tell him of the pleasure he has given us, and our delight seems fully to repay him for his thoughtfulness.

Down the mountains and back to Mount Carbon, where we arrive in the coolness of twilight, and our rambles in the coal-fields of the Schuylkill are ended.

## ZERO IN THE SUN.

BY THE AUTHOR OF "NINETY-NINE IN THE SHADE."

AS rail-tracks shorten in the cold,  
By Nature's great metallic law,  
So shrinks the man of iron mould,  
When these rude winds their weapons draw.  
These "eager airs" of icy breath,  
Whose myriad poniards, piercing, chilling,  
Seem dealing back a vengeful death,  
For out of that proverbial shilling.

The fuel-vendors thank their stars  
That Lehigh higher yet must go;  
And babies cuddle close to Mars,  
Because the Mercury is low;  
And Sunday at the twilight hour,  
Once lit by flames of tinder Venus,  
My flame bewails, with visage sour,  
The coldness that has come between us.

I'd fly to her, I'd break the ice  
With burning words of desperate man;  
But breaking ice is not so nice  
When it means Fanny, be my Fan!  
When ghosts of frozen smiles benumb  
The loving lips that shiver blue;  
And when the cool reply may come:  
"Ask pa," and pa is Mr. Cooley.

I'll don my double-worsted hose;  
I'll pile the grate with embers bright;  
I'll read my Burns, and toast my toes,  
And sing the songs the skalds indite;  
Or hie me to some fur-rin shore—  
Fire Island, or a land of geysers,  
Or Hottentots, or hellebore—  
To check my chattering incisors:

Drink ginger-tea as pudding thick,  
Compounded in a red-hot can,  
Stirred with a fire-wood toddy-stick,  
And ladled with a warming-pan—  
Unless some friendly foe, instead,  
Will hold me over Etna's crater,  
Heap coals of fire upon my head,  
And drop me like a hot potato.

ROSSITER JOHNSON.

## THE PASSAIC FALLS.

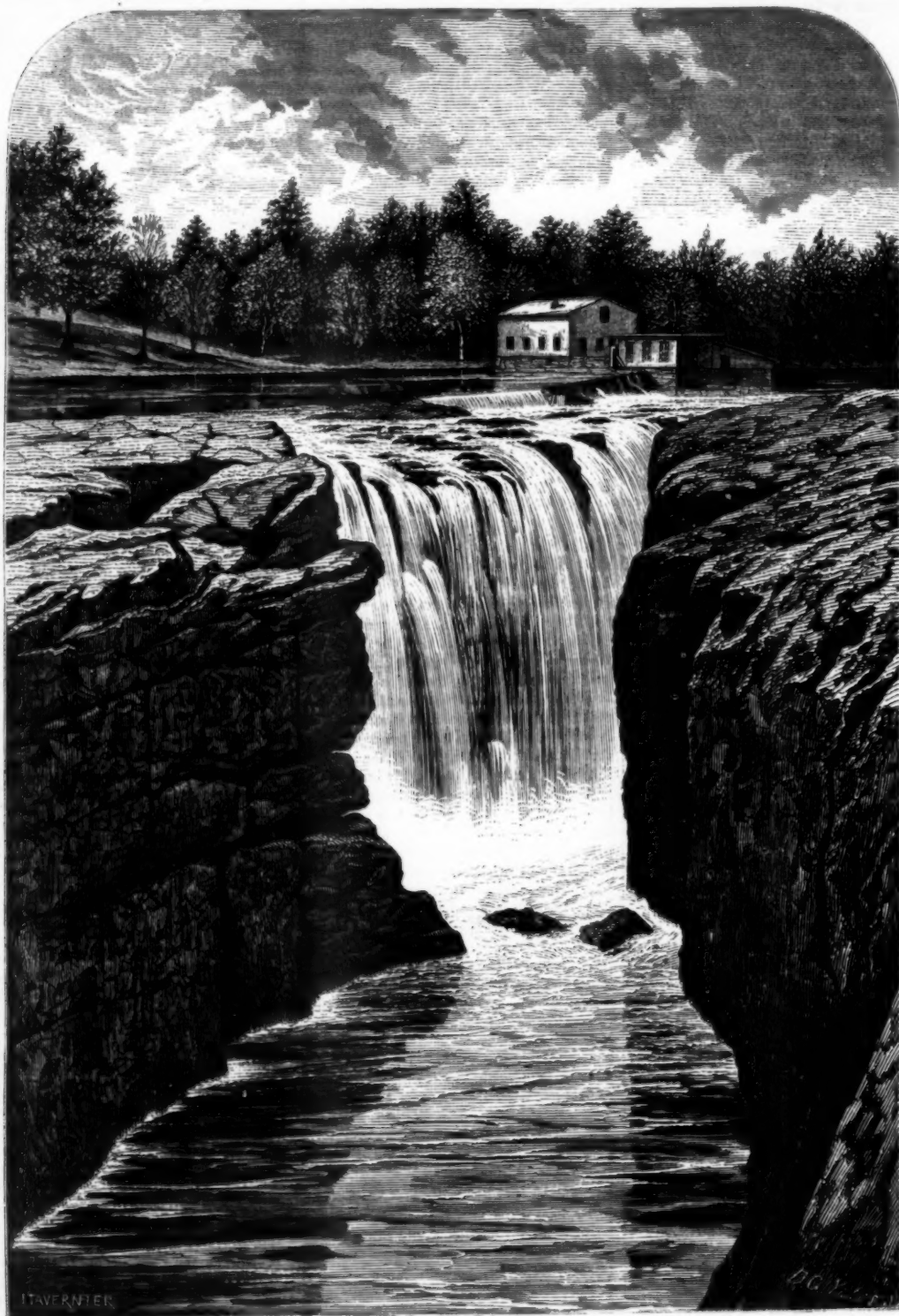
SEE ILLUSTRATION, NEXT PAGE.

THE falls of the Passaic River are so close to New York as to be comparatively unknown. It is not the Bostonian who pays pious pilgrimages to Bunker Hill, or the New-Yorker who meditates with patriotic heart-glow over the site of Fort Washington. And if things that are familiar to the world as household words have now become as nothings to the people who dwell beside them, being staled by custom, it cannot be thought a marvel that the falls of Paterson, New Jersey, should be unknown to the residents of New-York City, although only fifteen miles away. Therefore the "mock presentment" of the engraver to its own intrinsic merits will add the charm of novelty, and may induce many to take a ride upon the Erie Railway, and see the grand sight which Nature offers free of charge. Paterson lies at the base of a range of pine-clad hills of respectable dimensions, much of the town being built upon the foot-hills themselves, the result being that it is a city where there are many ups and downs. The crests of these break up the view in every direction, which would otherwise be superb; for, immediately in their rear, the ground breaks away into precipitous rocks of sandstone, that go sheer down many hundred feet into a superb valley. The river comes sweeping down through the passes of the hills with a fair, broad stream, and a swift current. As it approaches the descent, it sheers away from it like a frightened horse, and makes a circuit to the left as if it would avoid the leap. Being pressed back by the rising ground in that direction, it turns abruptly and pours its waters into a crevasse made in the sandstone, which, narrow at the point of the falls, widens out immediately into a gorge of much grandeur, and about a hundred yards in length. It then makes its way with much anger, pouring into the valley at first in a narrow stream, but soon with a broad flow, which at length encompasses the valley-bottom. The contour of the rocky walls at every point is bold and majestic, both where the river leaps in terror, and where the ground sheers from the town. The changes are well marked: first there comes the deep loam of the New-Jersey soil, next a bright-yellow sandstone of somewhat crumbling character; and then the Old Red sandstone, similar to that of which our brown-stone houses are built in New York, though of a more intense purple. The peculiar nature of the falls prevents a direct view, as all that can be seen is from the side. But even with this disadvantage the great volume of water pours down with such majesty of mien as to rivet the eye. Down at the bottom of the crevasse clouds of mist are formed, which rise in curious forms, like smoke acted on by the wind. It would be pleasant to look down into the centre of the hurly-burly and view the secrets of the caldron from the opposite side; but the continually-falling streams of vapor have caused a carpet of the finest and most treacherous mosses to cover the rocks, and it would be a dangerous feat to attempt. Beautiful as the view is at all times, in winter it is at its

best. For then the opposing cliffs of the crevasse are covered with ice wrought into the most fantastic forms. Here will be long strands of ice, like the shrouds of a man-of-war; there will be gigantic masses of the same substance, which bear the semblance of human beings covered with long garments and with peculiar veils; in a third place the ice, falling upon some fragment of vegetation, has wrought upon it until it shows like the crown of a great palm-tree. Sometimes there are coils of convoluted forms, like portions of boreal architecture, and at others simple masses of ice. The misty spray from the seething caldron below, being frozen as it rises into the air, is converted into fine-granulated snow, which covers all the trees with crystalline glory, and falls upon the dried grasses and weeds that linger in the crevices of the sandstone, making them stiff and glittering with diamonds of the purest water. The rocks themselves take on new shapes, for to their outlines the ice and snow give hints of semblances which the imagination quickly receives, seeing in their masses, crowned with glittering white, many things which without them fancy could never conjure up. Especially is this the case with a sandstone cliff to the left of the falls, looking upward, whose edge is charged with three distinct profiles of warriors, to which indeed the ice has given eyes and mustaches of the most formidable type. Perhaps without the winter's assistance this would be but a meaningless mass of sandstone.

From the caldron at the bottom of the rocks the river issues in a foaming current, crossed with such a multiplicity of jarring lines that it is white and circling until it issues from the gorge. Here, where its passion is slackened and its force abated, the ice-king gains power over it, and throws over its waters a mantle of white, under which it may be heard growling and thundering as it fights its way on to the valley. Here and there, where the ground becomes very precipitous, its waters gush out, having broken from their ice-chains; but these soon fall on them again, and hide them from the view. In summertime, this valley of rocks, as it is termed, is a favorite resort for those who love to combine admiration of the picturesque with the collecting of ferns. In the crevices of the rocks, especially where the place is damp with the spray and mist of the falling waters, these cryptogamians love to grow, as if desirous of dragging their admirers into as much danger as possible. The descent to the valley in the neighborhood of the falls has been facilitated by a wooden stairway, erected by the owner of the land, a Mr. Voorhies, who has made a kind of public park of it with commendable patriotic feeling. The ground beyond is well wooded with pines, and affords very fine views, from rising points, both of the grand valley and of the whole course of the Passaic from the hills above. The time, perhaps, may come when the crevasse over which the waters fall may be much widened by the eating away of the rock, and this will greatly enhance the beauty of the water-fall, of which, at present, the eye can discern but a side-glance.

RODOLPHE E. GARCZYNSKI.



PASSAIC FALLS.



## A SKETCH OF THE EARLY HISTORY OF GEOLOGY.

THE knowledge of geological facts is much more ancient than we are apt to suppose. Geology, in its infancy, was nurtured in the bosom of cosmogony, which gave rise to a supposed relationship between the two, whence geological study received its earliest impulse, but later only hinderance and impediment. In his "Principles of Geology,"\* which contains a complete history of the science, Sir Charles Lyell traces the recognition of geologic facts back to the heathen cosmogonies. It has, however, been conclusively shown by able scholars that these cosmogonies are, to a great extent, if not entirely, derived from the Hebrew Scriptures, and, therefore, are not the theories of men based upon actual observation. But, should it be granted that they are only the productions of the human intellect, this would necessitate the concession to the ancients of a far greater degree of intelligence and knowledge than it is generally supposed they possessed. Setting aside, then, the cosmogonies as not representing the ideas of men at the age to which they are referred, we find Herodotus† making the earliest mention of geologic phenomena. He, from the observations he had made while in Arabia, came to the conclusion, upon visiting Egypt, judging from the soil and other peculiarities of the country, that it had once been a gulf resembling that of Arabia, having been filled up by soil brought down by the Nile. In support of this theory, he adduced the existence of shells in the rocks of the mountains, and also the vast amount of matter annually transported to the delta of the Nile, of which he had been informed by the Egyptian priests. The recognition, by this old historian, both of geological phenomena and their teachings, compares favorably with the blindness of observers in succeeding ages, for it required years, and indeed centuries, for the establishment of these few simple facts. Considerably later than Herodotus, we find Pythagoras and Aristotle possessed of a knowledge of the teachings of geologic relics, and a true idea of the structure of the earth. Pythagoras, as Ovid‡ tells us, recognized the indestructibility of matter, and also believed that our globe had undergone great changes in the past. Aristotle, in his "Meteorics," declares that the distribution of land and water on the earth is not constant, as was believed, but varying. Strabo also, in his "Geography," directs his attention to the existence of shells enclosed in the rocks, and adopts an hypothesis to explain the phenomenon, "the profoundness of which," Lyell says, "modern geologists are only beginning to appreciate." He attributed the elevation of the land to the action of earthquakes, volcanoes, and other subterranean agencies, thus showing his thorough appreciation of the great power of these internal forces. Strabo seems to have been better acquainted with the facts of geology than either of his three predecessors. He

alone appears to have had a true conception of the grandeur and power of the agencies employed in bringing about the present condition of our globe. Pliny also, as we might naturally expect from our knowledge of his character, recognized and called attention to the past changes in our earth. In this field he was, however, more of a compiler than an original investigator, employing himself in gathering together the results of the few who had preceded him. From his particular mention of the islands that had from time to time appeared in the Mediterranean, and record of other volcanic disturbances, together with the manner of his death while endeavoring to get a nearer view of an eruption of Vesuvius, we are led to conclude that he agreed very nearly with Strabo as to the forces which had brought about geological phenomena. These five philosophers, notwithstanding the curious phenomena upon which they based their theories had attracted the attention of others, are to be considered the earliest pioneers in the field of geological investigation, for they alone had a true conception of their nature and teachings. For nearly ten centuries after the Christian era, the spirit of geological inquiry slumbered, when again it was revived by the Saracens, whose attention had been directed to the structure of the earth, and the curious forms entombed within its bosom. About this time Omar, a learned Saracen, wrote a work entitled "The Retreat to the Sea," based upon his individual observations. On examination, he had discovered a great discrepancy between the charts of his own day and those of the old Persian astronomers made two thousand years previous. From this fact he concluded that great changes had taken place in this brief period, and perhaps greater ones in the past. To this testimony was added his knowledge of the existence of salt springs and marshes in the interior of Asia, which pointed to the former occupancy of those regions by the sea. This theory, so surprisingly correct, Omar was compelled to renounce on the ground that it conflicted with the cosmogony of the Koran. Later, a few vague speculations were indulged in by Arabian writers; but the compulsory renunciation and flight of Omar to Samarcand, to escape persecution, eventually smothered the torch of geological investigation, so auspiciously lighted in the East. The attention of Christian Europe was not drawn to the phenomena of geology until the sixteenth century, when an almost endless series of discussions and conflicts was begun between rival opinions, which, for a time, retarded all progress. In 1517, the interest of Fracastoro was enlisted in these disputations by the discovery of a large number of fossils in a quarry from which stone was being taken to repair the old city of Verona. After considerable thought, he came to the conclusion that they had once been living animals. He engaged earnestly in an attempt to overthrow the idea that they were the result of "a plastic force in Nature"—a theory then almost universally accepted. Yet he allowed himself to advocate the equally absurd one that these fossils were all relics of the Noachian deluge. Notwithstanding the assertion of Fracastoro of the true nature of petrifications, it required

many years to firmly establish the fact. Meanwhile, many strange and fanciful theories were indulged in regarding them. Andrea Mattioli supposed there was a certain *materia pinguis*, or "fatty matter," in Nature, capable of producing these forms when subjected to heat. Falloppio, of Padua, held that they were originated by "the fermentation of the spots in which they were found," or, in some cases, derived their form from "the tumultuous movements of terrestrial exhalations;" while Mercati declared them to be "sports of Nature." In 1669, Steno, formerly a professor at Padua, wrote a treatise "On Gems, Crystals, and Organic Petrifications, enclosed within Solid Rocks." In it he attacked the prevalent theories of the day just referred to. To establish beyond all doubt the reality of fossils, he dissected a shark, and showed the identity between its teeth and those found as petrifications in Tuscany. He also compared the fossil shells of Italy with those then existing, and pointed out their similarities. But he, like Fracastoro, referred all stratified rocks to the flood of Noah. The diluvial theory, as this hypothesis was called, now began to exercise great influence on the progress of geological investigation. It received the ready patronage of theologians, who denounced all as heretics who dissented from it. And it, through them, became the great stumbling-block to geology, from whose hinderance it required full two centuries to recover. The first opposition to the strong tide of popular opinion was that of Quirini,\* who argued that, as the waters were never agitated to any great depth, they could not have transported large bodies to the mountains; nor could testacea have existed in the diluvial waters, for "the duration of the flood was brief, and heavy rains must have destroyed the saltiness of the sea." As almost always new opinions, as they spread from country to country, are compelled to combat over and over again the same prejudices, so, in the history of geology, while the question of the nature of organic remains had been determined in Italy and other parts of Europe, and another question of importance engaged attention, the nature of fossils had just awakened in England a long and severe struggle.

In 1677 Dr. Plot published "The Natural History of Oxfordshire," in which he maintained that fossils resulted from a plastic virtue latent in the earth. About this time also appeared Lister's "Catalogue of British Shells," to which was appended a list of the fossils, under the title of "Turbinated and Bivalve Stones." Truth, however, now found a bold advocate in Dr. Hooke, whose "Posthumous Works" were just published, in which he declared petrifications to have once been organized structures, and also denounced the diluvial theory as false, a step not without its dangers, for this hypothesis was defended by theologians with all their strength. Hooke, although possessing such a clear conception of the falsity of the leading theories of the day, allowed himself to frame a diluvial theory of his own much resembling the old one, in which he involved himself in contradictions, and to a certain extent counter-

\* New York: D. Appleton & Co.

† "Enterpe," xii., xiii. ‡ "Metamor.," lib. xv.

\* Quoted by Sir Charles Lyell.

acted the good effect of his writings. The history of geology at this period is but a succession of advancements and retrogressions of very little interest to any one. We will, therefore, pass over a host of names that meets us at this stage of the inquiry, noticing only those of most importance and greatest peculiarity. Burnet\* supposed the whole earth, in the beginning, to have been covered with a light crust over the sea which was destroyed by the Deluge, and from its fragments the mountains were formed. Woodward† thought the Deluge was the result of the momentary suspension of cohesion among mineral bodies. The entire globe was dissolved, and in the paste thus formed the shells were deposited; while Whiston‡ imagined that the earth was formed from one comet, and deluged by the tail of another. The most curious part of his theory, however, was that which attributed the increased sinfulness of antediluvians to the excess of heat that remained from the origin of the earth. It would be a mistake to suppose that the productions of all geologists at this period were impregnated with the vague ideas and fanciful theories which characterized the works of these few English writers. On the Continent, and especially in Italy, which had produced so many able geologists, men possessed of correct notions of geological facts and their importance were to be found, who labored earnestly and successfully to overthrow false theories; so that, before the end of the century, not only was the nature of fossils fully established, but attention directed to phenomena hitherto unnoticed. Of these men, Vallinieri and Lazzaro Moro, both of whom insisted strenuously upon the great part subterranean agencies had played in upraising and submerging islands and continents, Moro seized upon the sudden appearance of an island of considerable size in the Mediterranean during volcanic disturbances, which was found to be covered with volcanic ejections, and to have living oysters clinging to it, to combat the absurd theories then obtaining among geologists, whom he supposes to visit the island, and refer the oysters, etc., to "the plastic virtue in the earth" and the Deluge of Noah. Later, Buffon, in his "Natural History," revived the old theory of a universal deluge, first ventilated by Leibnitz in his "Protogea" in 1680. He, however, supplemented it with the hypothesis of a volcanic nucleus. The horizontal strata and deep submarine valleys he attributed to the degrading effect of the water, proving thus his appreciation of the transporting power of marine currents. Two years later Buffon, a geological Galileo, was summoned before the Sorbonne and compelled to retract some of the ablest portions of his work, and to append the retraction to his next work, on the charge that his theories conflicted with the Scriptures. Thus was geology again sacrificed on the altar of theology. In taking a retrospective glance over the history of geology up to this period, we find that nearly two centuries had been employed in the establishment of the real nature of fossils, a fact

recognized by Herodotus nearly five centuries before the Christian era. The discussions that had occupied this time had been wholly fruitless, for, besides shaking the faith in the diluvial theory, which soon after gave way, they imparted to geological studies a new impulse, and gave geologists themselves increased strength, which finally enabled them to come off victorious in the conflicts of the future. There now appeared in Germany a man whose influence on the history of geology for the next fifty years can scarcely be estimated. This was Professor Werner, of Freyburg, a skilful mineralogist, but not so well versed in geology. He, by the attractiveness of his manners and great erudition, gathered around him a band of followers who relied implicitly upon his teachings, and accepted his words as the oracles of truth. He especially cultivated mineralogy in its relation to the practical arts, such as mining and medicine. By the attractiveness of his lectures on geology he raised the institution with which he was connected from a mere school of mines to the rank of a university. Werner, among other things, taught his pupils that trap-rocks were chemical precipitates on water, a theory totally at variance with the existing belief; for Raspe and others had very correctly taught the igneous origin of the same. The disciples of Werner, however, eagerly accepted his theory, and defended it with great obstinacy; and it is principally through the conflicts thus brought about and their influence on succeeding geology that he is known. At this time Demarest, a mineralogist of considerable note, examined and made a geological map of the region about Auvergne, and declared the igneous origin of trap—a conclusion accepted by both Dolomieu and Montlosier, who together formed the school of Vulcanists. The contest between the school of Freyburg, or Neptunists, as they were called, and the Vulcanists, was now fairly begun. Both gained adherents in the various countries of Europe, and neither appeared likely to succumb. The only person who would not allow himself to be involved in the contest was Demarest, who, although he had collected sufficient data to refute the theory of the Neptunists, was accustomed, as Cuvier tells us, when questioned by them regarding his belief, to reply, "Go and see." Throughout the entire struggle the Neptunists were almost wholly supported by their faith in Werner and his teachings, who, as has been since discovered, possessed many other wrong ideas of geologic phenomena. This discussion was now commenced in England by the appearance of Hutton's "Theory of the Earth," in which he recognized the derivative character of the present globe, it being the ruins, he said, of an older one; and upheld the theory of the igneous origin of trap-rocks. From the compact structure and absence of all stratification in granite, Hutton imagined that it, too, might be of similar origin. To verify this supposition he set to work to examine the Grampians, hoping to find some point where, at its juncture with the superincumbent strata, granite displayed the phenomena of trap. His diligence was rewarded by the discovery, in 1785, of a complete verification of his theory at Glen

Tilt, which called forth such vehement exclamations of joy that his guides, as Playfair tells us, imagined that he had discovered a gold or silver mine. Having now elaborated a theory totally at variance with those of the school of Freyburg, Hutton became the leader of the Vulcanists in England, and the founder of the Edinburgh school. Hutton called forth the indignation and enmity of theologians by a passage in his work, in which he said: "In the present economy of the world I find no trace of a beginning, no prospect of an end." They, animated by fears lest this new theory should overthrow the Scriptures, labored earnestly to destroy it by withdrawing the popular sympathy. Voltaire, also, excited against geologists at large on account of the accommodation of their theories to the Bible, endeavored to weaken the faith in their teachings by sophisms and untruths. His geological writings abound in the most glaring falsehoods; at one time we find him declaring that fossils are not realities; at another that they were shells dropped from the hats of pilgrims on their return from the East.

The conflict between the two rival schools of geologists still was carried on with great vigor. In England, the Vulcanists were opposed by clergy, laity, and even poets, on purely theological grounds; while, on the Continent, Vulcanist and Neptunist met in a hand-to-hand encounter, and each was animated by a desire solely to establish his theory. All attention was withdrawn from independent investigation, and bitterness and enmity increased gradually until they reached a height admitting of no reason. At this period, fortunately for geology, a new party came upon the field, who, repudiating the views of both for a time, set about to determine the truth regarding the much-agitated question. Through their labors, the igneous origin of trap, granite, and basalt, was fully established, and geology placed on a firm basis. Yet one field still remained to be cultivated, and that was the nature of organic remains. To this question Cuvier applied all his powers and knowledge, with a result far exceeding the most sanguine expectations. Especial praise and honor are due him on account of the correctness and reliability of his achievements. His success completed the broad foundation of fundamental principles upon which our modern geology rests.

FRANCIS ROWLAND.

## EGGS IN ENGLAND.

RICHARD SHATSWELL is the name of the great egg-dealer in Leadenhall Market, London. The surname being that of my maternal ancestry, and the race, on both sides of the Atlantic, from the times of Sir Andrew Wood and the "bold Bartons," having followed the seas, I one day asked Mr. Shatswell how it came to pass that he was an egg-dealer and not a sailor.

"It's all on account of some little doggies, sir," said he, speaking with a strong Scotch accent; "and, if you have leisure, I will tell you the story."

\* "Telluris Theoria Sacra."

† "Natural History of the Earth."

‡ "A New Theory of the Earth."

I assented, and he narrated the following curious bit of Lowland family history:

"Rather more than seventy years ago, a stout little boy, in his seventh year, was dispatched from an old-fashioned farm-house, in the upper part of the parish of Cromarty, to drown a litter of puppies in an adjacent pond. The commission was any thing but congenial. He sat down beside the pool and began to cry over his charge; and, finally, after wasting some time in alternate paroxysms of indecision and sorrow, instead of committing the puppies to the water, he tucked them up in his little kilt, and set out by a blind pathway which went winding through the stunted heath of dreary Maolbuoy Common, in a direction opposite to that of the farm-house. After some doubtful wandering on the waste, he succeeded in reaching, before nightfall, the neighboring seaport-town, and presented himself, laden with his burden, at his mother's door. The poor woman—a sailor's widow, in the humblest circumstances—raised her hands in astonishment!

"Oh, my puir bairn!" she exclaimed. "What does this mean? What brings you home?"

"The wee doggies, mither," said the boy. "I could na drown the wee doggies, so I fetched them to you."

"What afterward befell the 'doggies,' is not told, but, trivial as the incident may seem, it exercised a marked influence on the circumstances and destiny of at least two generations of the Shatswell family. The boy, as he stubbornly refused to go back to his aunt, was bound out to a poulterer, and I was born, in consequence, a poulterer's son, and grew up into an egg-merchant."

I have narrated the story because I was assisted to many of my facts by the egg-dealer, and also because I fear it will be the only bit of romance about my commonplace subject.

The annual consumption of eggs in London is now rather more than two hundred and twenty millions, or nearly seventy eggs a year to each person. This immense and increasing consumption is due to their comparative cheapness. Forty years ago the money value of eggs, as compared with butcher's meat, was double what it is now. Egg commerce, as an important thing, dates from the establishment of steam-navigation; and the present regular and inexhaustible supply is maintained by means of steamers and rail.

During those early days, large supplies of eggs came from Scotland. The vessels in which they were sent were often weeks at sea, and, as eggs have in themselves a tendency to decay, which tendency is increased by motion, these sea-tossed eggs, filling the markets of the great metropolis, gave a character to London eggs more unenviable than they really deserved. The Kentish farmers and Surrey cotters, as far back as the time when Alfred reigned, sent the produce of their poultry-yards to London, and a belated traveller on the great Middlesex road would meet any week-day morning hundreds of covered carts, under the gray starlight, jogging their dozen miles to Covent Garden, where farmers' wives and daughters would chaffer and drive bargains for new-laid eggs till sundown.

Nowadays it is the small proprietors who keep fowls. The egg-producing conditions of land are to be found wherever capital is scarce and labor cheap. The more slovenly the cultivation of the soil, the better is the feeding-ground for poultry. Such conditions exist in the Pas de Calais, Belgium, and Ireland; and, as all these places are within easy access of the coast, it is with them that the principal trade for the London market is carried on. Even as long ago as the year 1820, the French farmers sent annually twenty million eggs to England; and, though a duty was paid upon them at the rate of a penny the dozen, they were sold at twenty a shilling, and controlled the market. In 1835 the imports from France into England were seventy-six millions, and in 1870 they had amounted to one hundred and thirteen millions.

The Irish egg-trade with London, once very considerable, has fallen off. The great exodus, which has deprived the Emerald Isle of half its cotters, did much toward this. The potato-famine helped. The cholera almost ended the trade. From two hundred and fifty million eggs sent from Ireland to England in 1847, the supply in 1870 had dwindled down to eighty-nine millions, hardly one-tenth of which reached London.

The employment which the great English demand for eggs furnishes for the poor in different countries is curious. The manufacture of egg-boxes, for example, is a unique craft of itself. Unlike all other boxes, these have two purposes in view—present use and future value. They are never used twice for packing, and have a ready sale at their cost value the moment their contents are emptied. English carpenters and joiners, taking them to pieces, use their rough-sawn boards for window-paddings and floor-linings; wheelwrights split them into plugs to wedge tenons into mortises and spokes into felloes; and ship-fitters, edging them with India-rubber, fix with them, in the most perfect manner, a vessel's binnacles and dead-lights. The demand for these boxes not only minimizes the cost of egg-packages to the lowest point, but gives, in Northern France, profitable employment to tens of thousands of mechanics and laborers.

Collecting of eggs, both in Ireland and France, employs numerous hands and feet, which would otherwise be idle. In the county of Roscommon, as the wayfarer loiters along the hawthorn-hedged road, gazing now at the sheep-dotted pastures that terrace themselves over shale and sandstone, like hanging gardens, far up the Slieve-Bawn ranges and Curlew Hills, and then at the door-stoops of the stone cottages he is passing, twined into very bowers by graceful festoons of mingled eglantine and ivy, or, casting his eyes along the broad valley of the Boyle, sees the deep green of the meadows flecked with grazing herds, and the bosom of the quiet flowing river disturbed by rafts of fern and gondolas of hay moving sluggishly under the rustic bridges, there constantly meet him half-clad but merry boys of nine years old and upward, carrying flat, square baskets on their heads, and trolling some Irish roundelay as they hasten on from farm-house to cottage.

They are the egg-gatherers. Each boy has his regular beat, which he tracks twice a day. Full of life and frolic—as what Irish boy is not?—the caution necessary for conveying their brittle ware in safety gives them an air of business and steadiness unlike the ordinary volatile habits of Milesian youth. And yet, nothing in the way of repartee can be sharper or quicker than that they will return if provocation is given or opportunity occur.

"Father O'Burn," said one of them, returning a religious tract to a young Protestant colporteur, "Father O'Burn says I am not to read this, but give it back to you."

"I am sorry," replied the proselyter, "that your priest keeps you in ignorance. What harm does he think it will do you?"

"Indade, I don't that," replied the boy. "He tould me, at Ash-Wednesday confession, that he was afeard I cared neither for God nor devil; and, if I read the tract, perhaps he's afeard I'll love 'em both alike."

In the Pas de Calais the juvenile egg-collectors are mostly of the female sex. The system is, however, nearly the same, each girl having her *ronde*, which she travels twice a day. The baskets are there carried in the hand instead of on the head; and, in still greater contrast, are tidy, warm clothing and clumping wood-shoes, starched vandyke, and top-knot cap, to the filthy tatters and bare legs of the boys of Roscommon.

The eggs which supply the London consumption may be classed under three heads:

1. Foreign, Irish, and Scotch, which probably make at least four-fifths of the entire bulk, and whose average value, in first hands, is about ten cents (fivepence) a dozen.

2. English, which are shipped to London coastwise, or are brought by rail, and are worth to the wholesale dealer about sevenpence a dozen; and—

3. The new-laid eggs, which are produced in the metropolis and neighboring districts, and whose value varies from one shilling and sixpence a dozen to five shillings, and in winter to even more.

These last, notwithstanding the better price, are few, and growing fewer, for two reasons: One is, the gradual consolidation of small farms with larger ones, by which the egg-producing conditions of the land are more and more abolished; and the other, the increasing prosperity of agriculturists, which leads them to despise small gains. Meanwhile, the trade in new-laid eggs is on the increase. They are always in demand. An egg, fresh from the hen, will sell for twice as much as when it is a day old. This has led to the keeping of fowls in great numbers in London, under various most amusing difficulties.

There is no part of London, either city or suburbs, which is not tenanted, more or less, by barn-yard fowls. Go into the neighborhood of the docks, where every other shop is stocked with gear for the ship or kit for the sailor—where quadrants and sextants hang behind dusty show-cases, and the compass-cards tremble with the motion of cabs and vans passing by—where the smell is of tar, and the sights are of cordage, and flannel shirts, and canvas trousers, and rough pilot-coats, and shiny black dreadnaughts, and



where every public-house is a jolly "Jack Tar," and every room behind the bar a "free concert"—and poultry is to be found at every door and on every roof! Visit the respectable squares of Montague, or Connaught, or Fitzroy, or Cadogan—the old mansions of Grosvenor, or the more imposing residences of Portman—go even to fashionable Mayfair, or wealthy Piccadilly, or aristocratic Belgravia, and in the yards and stables and coach-houses of every mews you will hear the cackling of hens and crowing of cocks. Working-men's wives, dwelling in the small thoroughfares of the suburbs, where the fowls roam the streets by day and roost in the coal-cellars by night; cabmen on the stands, where the fowls grow fat pecking the undigested grain and the droppings from the nose-bags; coffee-shop men, in cellars and back-yards, where fowls are cheaply fed from broken meats—all keep them. There is not a huckster nor green-grocer, potato-dealer nor coal-shed man, newsdealer nor tinman, blacksmith nor wire-worker—in fact, there is scarcely a petty artificer in the East End, nor a small tradesman in the by-streets, who does not advertise new-laid eggs in his windows, and sell them warm from the nest. I have seen scores of fowls domiciled on roof-tops, where they have thriven for generations, walking along the tiles by day, and sheltered between the slates and attic-ceilings by night. I have been roused at dawn by the crowing of cocks in Cheapside; and, wherever the sound of Bow-bells is heard, as their musical carillons float over the heads of nearly four million souls, there, too, is just as certainly heard the cluck or cackle of Dame Parlet and the boastful cry of chanticler.

As soon as cold weather sets in, eggs mount up in value. By the end of October they are doubled in price; and, before Christmas, they are doubled again. There are experts who profess to know the art of making hens lay all winter; but, as the average annual product of a healthy fowl is about one hundred and twenty eggs, and the maximum one hundred and forty, the spring and summer work must be retarded in order to gain a winter supply. Something may undoubtedly be done by artificial feeding, equable temperature, and separation of the sexes, to bring this thing about, but it will then be the exception rather than the rule. That there is any occult science, by the practice of which the nature of the barn-yard fowl may be changed, I doubt. It would, upon examination, resolve itself probably into that class of mysteries which Professor Peters's Cato expressed about the effects of the eclipse of the sun in 1869. While others were detailed to examine the effect produced upon bees in the field and horses on the road, birds on the wing and reptiles in their haunts, Cato was directed to watch the poultry-yard. When called upon to make his report, he said:

"Beats de debbil! When dark come, goose squat, turkey fly up de tree, and chicken go to roost. How long you know dis ting was comin', 'fessor?"

"More than two years," answered the man of science.

"Dat is strange!" rejoined Cato. "Here

you, way in Boston, knowed two years ago what dese bery fowls was gwine to do dis bery day, and you nobber see one of dem afore!"

There is a curious practice, in connection with the egg-commerce of London, which is worthy of record. *Gourmands and gourmets*, all over the world, value food for the table in the ratio of its unseasonableness. This is especially true of good livers in the great metropolis. Green peas, sold for a sixpence the quart in July, that bring a guinea in January; strawberries, good for threepence in the heat of summer, that call for a sovereign in the dead of winter; and lamb, fit for mint-sauce, which is dull at a shilling the pound in April, demanding ten shillings in November, are in constant demand for the feasts of the great companies and the dinner-parties of the gentry. Of course, supply, at any cost of labor or life, will always meet demand; and, to the purse that can pay for it, there is neither flesh nor fish, fruit nor flower, arctic delicacy nor tropical rarity, ever wanting in the London markets. This is particularly true of English ducks. To be succulent and savory, they must be two months old; and the physiology of duck-life naturally brings that to pass in the month of February. But ducks are in demand in September, especially because great dinners attend at that time the adjournment of Parliament. To meet this, the latest eggs laid by ducks are dispatched to London from all parts of the kingdom, valued from a sovereign to three sovereigns the dozen, and artificially hatched. The ducklings are tenderly nursed, carefully housed, judiciously fed, with lawns on which to stray and ponds in which to swim, until they are qualified for the spit and savory to the autopsy of the table. These pampered water-fowls will sell, when dressed, for five pounds sterling a pair. The price is abnormal, but so also is that condition of life which is constantly making the rich richer and the poor poorer.

N. S. DODGE.

## THE STORY OF CATHARINE CORNARO.

IN one of the many rooms of the Uffizi Palace, the Florentine casket that holds so many of earth's jewels, stands always upon the easel of some copyist or other, the portrait of Catharine Cornaro, Queen of Cyprus, and daughter of the Republic of Venice. Half concealed in one of the heavy folds of the crimson robe are certain characters that tell us of the hand of a great master. A careless haunter of galleries would be apt to turn away from this picture without a second glance, to revel in the innumerable beauties of nude nymphs and goddesses with which the name of Titian is chiefly identified in his mind.

But for the copyist, whose profession it is to seek out the soul that lurks in each rare old canvas, and for us who know the history of this wonderful woman, and know, too, that in her portrait the artist embodied some of the highest thoughts and happiest days of his

long life, it has a charm far beyond a mere gorgeousness of color.

It is a proud figure, that of this regal, splendid woman. The head is adorned with those marvellous stones of conquered Byzantium. The face, beautiful, superb, self-contained, wears yet as its crowning interest the expression of an inscrutable mystery. Such an expression it is as might well befit the features of one whose actions and very thoughts were so closely in the keeping of a Venetian senate.

As she stands there before us, lovely, royal, with a tigress light in her half-averted eyes, and with just enough womanly softness in the shadows about her mouth to let us see why the painter was moved to throw a tender, glorifying light over his picture—as she stands there, with that strange look upon her face, with one white hand pressed against her jewelled bosom, the other hidden away in the folds of the velvet robe, as though she held some dreadful secret out of sight, she seems to me, after so many years, the best embodiment that is left us of the old Venetian life. To me she is a perfect realization of the terror and mystery and magnificence that give such fascination to the very sound of "Venice."

If Paul Veronese had but known it, there existed, almost at his door, a pictured face that served then, and will always serve, to epitomize the lordly city that gave it being. Yet only two hundred years after the beautiful original was dust and ashes, he painted, with a brush full of divers conceits, upon the ceiling of the doge's council-chamber, "The Genius of Venice," as a blond, high-colored goddess, reclining in the midst of cherubs and cornucopias. Well, it pleased the senate and brightened the dismal hall, but the true "Genius of Venice" was left to wander abroad to find a resting-place at last in the Florentine palace.

For years the fortunes of the Cornaro family had been entwined with those of doge and senate and council. She came of good ancestry, this royal Catharine—ancestry that had always fed sumptuously, scattered its gold freely, and entertained its guests imperially. But a hundred years before the birth of the future queen, lived one Federico Cornaro, senator. In his palace, on the Grand Canal, for three weeks, he held in regal lodging the King of Cyprus, and, to please his noble guest, invented every day some new diversion of regatta or tournament. To him was granted, in return for service done to the state in time of war and famine, a burial-chapel in the church where Titian's own ashes were laid to rest, nearly two centuries after. And now he is all but forgotten, this haughty noble, while the storied face of his beautiful descendant will never die, because the love of a painter has transfigured it for eternity.

When Catharine was fourteen, a decree of the senate married her to the then King of Cyprus, the last of his line. With all the pomp attendant upon the nuptials of the daughter of a royal house, she went to her island-home. For a while she lived the happiest of lives, but at nineteen she was widowed. Then began the attack of the senators upon this defenceless countrywoman of theirs.

They had long had their astute old eyes upon this dainty little possession of Cyprus, which, in their hands, would make such a delightful resting-place for vessels on their way to the East, and such a capital post of defence against the Turks. They represented to the noble lady the advantage of placing herself and her kingdom under their protection, of resigning her title of queen, and retiring into private life. She declined their interference, and proclaimed her perfect ability to manage her own affairs.

The wily senate did not attempt to force her into submission. Force was something crossed out of Venetian policy. But, year after year, ambassadors were sent to repeat this advantageous offer, and year after year she refused it. The crafty body enlisted all her relations in its cause, and sent them likewise to the court of Cyprus, to advise with their refractory kinswoman.

But she heeded not, this beautiful, determined lady. While her son lived, she struggled on for his sake, and for the sake, too, of a certain haughty stubbornness ingrained in her proud blood. With her boy's future before her, she bore up bravely against war, pestilence, famine, rebellion. At all risks, she would keep his birthright safely for him, until he should be old enough to keep it for himself. Then, when there should be a man upon the throne, the senate would not dare attack the independence of the little kingdom. So she lived on in hope.

But one day her son died. Then every thing was changed for her. What mattered ambition when the child for whom she had cherished it would never know its meaning? What mattered the freedom of the state to her, with whose death it was sure to die?

The senate, watching all her movements from afar, profited by the hour of her bitter grief, to send to her another emissary in the person of her own brother, himself a senator and trusty servant of the republic. He was authorized to offer, in exchange for the surrender of her kingdom, the Castle of Asolo, together with a certain yearly revenue, suited to her high position. The lonely future before her, the troubled past behind her, the sorrowful present that held her thoughts fast, found voice in the answer she gave: "Yes, I will obey the noble senate. I am worn out and tired. My son is dead."

So she left the lordly home that had been hers for so many years, and took up her abode in the dwelling that was offered her. It stood somewhere near Treviso, and was in truth a goodly castle. She gathered friends to herself from far and near. The fame of her beauty, her wit, her hospitality, and her eventful life, went abroad and spread itself over all Italy. Princes, poets, painters, formed the court of this dethroned queen. She found happiness here, too, of a quiet and peaceful kind, though ever and anon I fancy she may have sighed for the old stormy life of excitement and danger. I fancy there was a fascination about always holding herself ready to do battle for her throne, which she must have missed sadly in those tranquil later days of hers.

With the men of genius who crowded her halls, came Titian. He was just starting out

on his pilgrimage through that wonderful field of color—the pilgrimage that was to make him famous among men. By his friends and patrons he was still looked upon only as a promising young painter, who might perhaps do something great some day.

In this beautiful, stately woman, so many years older than himself, he found the very inspiration he needed. He loved her for her beauty, revered her for her intellect, and thanked her for her appreciation of him. And she in her turn caressed him, encouraged him, and flattered his ambition. Perhaps the thought of her own dead son, so far away in his island-grave, had something to do with her tenderness toward the boy-artist.

Is it to be wondered at, then, that, when he painted this fair lady's portrait, with all his youthful strength, he painted it with somewhat of the reverent love, which, in after-years, he was wont to infuse into his conceptions of the Virgin Mother, mingled with the adoration of a young artistic nature of a beautiful woman?

For years she rejoiced in his success, and then she died, and was laid to sleep in the church of San Salvatore, in the heart of Venice, far away from the loved island. There is a monument to her, a ghastly thing that strangers stop to stare at. But her real monument lives and breathes upon the canvas of Titian. For here, Catharine Cornaro herself stands before us in all the pride of her splendid beauty.

Look once more upon the picture, for now that you have heard the story of this woman's life, you will see, as I do, certain things that are written in her face. In her tigress-eyes I see lights that gleam forth a fierce, tender love for her son. On her brow I read a proud determination that accords well with the secret of that fair white hand. About her mouth I see hover the smile that stooped from its high place to encourage an obscure young painter. And, thrown over all this beauty, making it more beautiful still, I feel, though I see not, the mysterious glory that reveals to me the loving presence of the master-hand.

L. ADAMS.

## MISCELLANY.

*Selections from New Books and Foreign Journals.*

### LIFE AND SOCIETY IN THE LAST CENTURY.

[RESUMED FROM MISCELLANY IN LAST NUMBER OF JOURNAL.]

PEOPLE from all ends of the world then congregated at Tunbridge Wells, and Mrs. Montagu sketched them smartly, and grouped them cleverly, in pen and ink. One of the best of these outline sketches is that of a country parson, the Vicar of Tunbridge, to whom she paid a visit in company with Dr. Young and Mrs. Rolt. "The good parson offered to show us the inside of his church, but made some apology for his undress, which was a true canonical dishabille. He had on a gray striped calamanco nightgown; a wig that once was white, but, by the influence of an uncertain climate, turned to a pale orange; a brown hat encompassed by a black hat-band; a band, somewhat dirty,

that decently retired under the shadow of his chin; a pair of gray stockings, well mended with blue worsted, strong symptoms of the conjugal care and affection of his wife, who had mended his hose with the very worsted she had bought for her own." The lively lady and her companions declined to take refreshment at the parsonage, where, she made no doubt, they would have been "welcomed by madam, in her muslin pinnas and sarsnet hood; who would have given us some mead and a piece of cake that she had made in the Whitsun holidays, to treat her cousins." After dinner at the inn, the vicar joined them, "in hopes of smoking a pipe, but our doctor hinted to him that it would not be proper to offer any incense but sweet praise to such goddesses as Mrs. Rolt and your humble servant. I saw a large horn tobacco-box, with Queen Anne's head upon it, peeping out of his pocket."

She was the centre of a circle of admiring friends; and, when established for months together at Tunbridge Wells, her coterie was a thing apart from those of the Jews, Christians, and heathens of all classes, who crowded the Pantiles or the assembly-rooms. Her letters sparkle with the figures that flit through them. Some contemporary ladies of the last century are thus sharply crayoned: "I think the Miss Allens sensible, and I believe them good; but I do not think the graces assisted Lucina at their birth. . . . Lady Parker and her two daughters make a very remarkable figure, and will ruin the poor mad woman of Tunbridge by outdoing her in dress. Such hats, capuchins, and short sacks as were never seen! One of the ladies looks like a state-bed running upon castors. She has robbed the valance and tester of a bed for a trimming. They have each of them a lover."

A country-house, well furnished with books, made Sandleford more agreeable to her than the glories within and the dust without her house in Hill Street. She speaks deliciously of having her writing-table beneath the shade of the Sandleford elms, and she thus pleasantly contrasts country-house employments with the pleasures of reading ancient history, which lightened the burden of those employments: "To go from the toilet to the senate-house; from the head of a table to the head of an army; or, after making tea for a country justice, to attend the exploits, counsels, and harangues of a Roman consul, gives all the variety the busy find in the bustle of the world, and variety and change (except in a garden) make the happiness of our lives." She read Hooke's "Roman History" as an agreeable variety. Her mind was stronger than her body.

It was at this period that Mrs. Montagu first appeared as an authoress, but anonymously. Of the "Dialogues of the Dead," published under Lord Lyttleton's name, she supplied three. They are creditable to her, and are not inferior to those by my lord, which have been sharply criticised, under the name of "Dead Dialogues," by Walpole. In "Cadmus and Mercury," the lady shows that strength of mind, properly applied, is better than strength of body. There is great display of learning; Hercules, however, talks like gentle Gilbert West; and Cadmus, when he says that "actions should be valued by their utility rather than their *éclat*," shows a knowledge of French which was hardly to be expected of him.

When the fashionable world flocked to Mrs. Montagu's house in Hill Street, in the middle of the last century, the street was not paved, and the road was very much at the mercy of the weather. To get to the house

was not always an easy matter. When entered, the visitor found it furnished in a style of which much was said, and at which the hostess herself laughed. "Sick of Grecian elegance and symmetry, or Gothic grandeur and magnificence, we must all seek the barbarous gaudy *gout* of the Chinese; and fat-headed pagods and shaking mandarins bear the prize from the finest works of antiquity; and Apollo and Venus must give way to a fat idol with a scone on his head. You will wonder I should condemn the taste I have complied with, but in trifles I shall always conform to the fashion."

Adverting to a wicked saying, that few women have the virtues of an honest man, Mrs. Montagu maintained that a little of the blame thereof falls on the men, "who are more easily deluded than persuaded into compliance. This makes the women have recourse to artifice to gain power, which, as they have gained by the weakness or caprice of those they govern, they are afraid to lose by the same kind of arts addressed to the same kind of qualities; and the flattery bestowed by the men on all the fair from fifteen, makes them so greedy of praise, that they most excessively hate, detest, and revile every quality in another woman which they think can obtain it." This is the censure, or judgment, be it remembered, on last-century ladies!

Of course, Mrs. Montagu studied the gentlemen as profoundly as the ladies. As one result, she gently laughed at Dr. Young's philosophy, which brought him to believe that one vice corrects another, till an animal made up of ten thousand bad qualities grows to be a social creature tolerable to live with. Sir William Brown could hardly claim this toleration, for he had not discovered (said Mrs. Montagu) that the wisest man in the company is not always the most welcome, and that people are not at all times disposed to be informed. Fancy may easily bring before the reader the sort of conversation which Mrs. Montagu was able to hold with Mr. Plunket. She says of it: "Some people reduce their wit to an impalpable powder, and mix it up in a rebus; others wrap up theirs in a riddle; but mine and Mr. Plunket's certainly went off by insensible perspiration in small talk." She was so satisfied that there was a right place for a wise man to play the fool in, that she expressed a hope to Gilbert West (who was turning much of her thought from this world to the next) and to his wife, that "you will, both of you, leave so much of your wisdom at Wickham, as would be inconvenient in town." West feared that, at Sandeford, she sent invitations to beaux and belles to fill the vacant apartments of her mind. She merrily answered that there was empty space enough there for French hoops and echoes of French sentiments; but she also seriously replied, "There are few of the fine world whom I should invite into my mind, and fewer still who are familiar enough there to come unasked."

Mrs. Montagu hated no man, but she thoroughly despised Warburton. The way he mauled Shakespeare by explaining him, excited her scornful laughter; the way in which he marred Christianity by defending it, excited much more than angry contempt. "The levity shocks me, the indecency displeases me, the grossness disgusts me. I love to see the doctrine of Christianity defended by the spirit of Christianity." Bishop Warburton and some country parsons were equally silly in her mind. Of a poor riddle she says: "A country parson could not puzzle his parish with it, even if he should endeavor to explain it in his next Sunday's sermon. Though I have known some of them explain a thing till all men doubted it."

In the February of this year, 1762, Lady Mary Wortley Montagu had returned to England, after many years of absence. In October, in the same year, she died. Of her appearance on her return, Mrs. Montagu wrote as follows to her sister-in-law at Naples:

"February 16, 1762.—You have lately returned to us from Italy a very extraordinary personage, Lady Mary Wortley. When Nature is at the trouble of making a very singular person, Time does right in respecting it. Medals are preserved when common coin is worn out; and, as great geniuses are rather matters of curiosity than of art, this lady seems reserved to be a wonder for more than our generation. She does not look older than when she went abroad, has more than the vivacity of fifteen, and a memory which, perhaps, is unique. Several people visited her out of curiosity, which she did not like. I visit her because her cousin and mine were cousin-germans. Though she has not any foolish partiality for her husband or his relations, I was very graciously received, and you may imagine entertained, by one who neither thinks, speaks, acts, nor dresses, like any body else. Her *domestic* is made up of all nations, and, when you get into her drawing-room, you imagine you are in the first story of the Tower of Babel. An Hungarian servant takes your name at the door; he gives it to an Italian, who delivers it to a Frenchman; the Frenchman to a Swiss, and the Swiss to a Polish; so that, by the time you get to her ladyship's presence, you have changed your name five times, without the expense of an act of Parliament."

"I was told" (Mrs. Montagu writes from Edinburgh) "Mr. Gray was rather reserved when he was in Scotland, though they were disposed to pay him great respect. I agree perfectly with him that to endeavor to shine in conversation, and to lay out for admiration, is very paltry. The wit of the company, next to the butt of the company, is the meanest person in it. But, at the same time, when a man of celebrated talents disdains to mix in common conversation, or refuses to talk on ordinary subjects, it betrays a latent pride. There is a much brighter character than that of a wit, or a poet, or a savant, which is that of a rational and sociable being, willing to carry on the commerce of life with all the sweetness and condescension, decency and virtue will permit. The great duty of conversation is to follow suit, as you do at whist. If the eldest hand plays the deuce of diamonds, let not his next neighbor dash down the king of hearts, because his hand is full of honors. I do not love to see a man of wit win all the tricks in conversation, nor yet to see him sullenly pass. I speak not this of Mr. Gray in particular; but it is the common failing of men of genius to assert a proud superiority or maintain a prouder indolence. I shall be very glad to see Mr. Gray whenever he will be pleased to do me the favor. I think he is the first poet of the age; but, if he comes to my fire-side, I will teach him not only to *speak prose*, but to talk nonsense, if occasion be. . . . I would not have a poet always sit on the proud summit of the forked hill. I have a great respect for Mr. Gray, as well as a high admiration."

In 1769 Mrs. Montagu published anonymously her "Essay on the Writings and Genius of Shakespeare." This work, once widely famous, may still be read with pleasure. It was written in reply to Voltaire's grossly indecent attack on our national poet. . . . The greatest praise which the essay received was awarded to it by Cowper, many years after it was published. Writing in May 27, 1788, to Lady Hesketh, Cowper said: "I no longer wonder that Mrs. Montagu stands at the head of all that is called learned, and that

every critic veils his bonnet to her superior judgment. I am now reading and have reached the middle of her essay on the genius of Shakespeare—a book of which, strange as it may seem, though I must have read it formerly, I had absolutely forgot the existence. The learning, the good sense, the sound judgment, and the wit displayed in it, fully justify not only my compliment, but all compliments that either have been already paid to her talents or shall be paid hereafter. Voltaire, I doubt not, rejoiced that his antagonist wrote in English, and that his countrymen could not possibly be judges of the dispute. Could they have known how much she was in the right, and by how many thousand miles the Bard of Avon is superior to all their dramatists, the French critic would have lost half his fame among them."

In 1775-'76, among the visitors at Bath occasionally seen by Mrs. Scott, was a little lame Scottish boy, between four and five years old. When he had bathed in the morning, got through a reading-lesson at an old dame's near his lodging on the Parade, and had a drive over the Downs with the author of "Douglas" and Mrs. Home, the boy was sometimes to be seen in the boxes of the old theatre. On one such occasion, witnessing "As You Like It," his interest was so great that, in the middle of the wrestling-scene in the first act, he called out, "A'n't they brothers?" The boy, when he had become a man, said in his autobiography, "A few weeks' residence at home convinced me, who had till then been an only child in the house of my grandfather, that a quarrel between brothers was a very natural event." This boy's name was Walter Scott. Much of the other company at Bath was then about to withdraw from the stage which the boy was to occupy with such glory to himself, and to the lasting delight of his countrymen.

In the summer of 1776 Mrs. Montagu was to be seen in Paris, welcomed to the first circles as a happy sample of an accomplished English lady. Voltaire, then in his dotage, took the opportunity of her presence to send to the Academy a furious paper against Shakespeare. The lady had a seat of honor among the audience while the vituperative paper was read. When the reading came to an end, Suard remarked to her, "I think, madam, you must be rather sorry at what you have just heard!" The English lady, Voltaire's old adversary, promptly replied: "I, sir! not at all. I am not one of M. Voltaire's friends!" She subsequently wrote: "I felt the same indignation and scorn at the reading of Voltaire's paper, as I should have done if I had seen harlequin cutting capers and striking his wooden sword on the monument of a Cæsar or Alexander the Great."

"You are very polite" (letter from Mrs. Montagu) "in supposing my looks not so homely as I described them; but, though my health is good, the faded roses do not revive, and I assure you I am always of the color of *la feuille morte*. My complexion has long fallen into the sear and yellow leaf; and I assure you one is as much warned against using art, by seeing the ladies of Paris, as the Spartan youths by observing the effects of intoxicating liquors on the helots. The vast quantity of rouge worn there by the fine ladies makes them hideous. As I always imagine one is less looked at by wearing the uniform of the society one lives in, I allowed my *fraiseuse* to put on whatever rouge was usually worn. But, a few years ago, I believe, my vanity could not have submitted to such a disfiguration. As soon as I got to Dover, I returned to my former complexion. I own I think I could make that complexion a little better by putting on a little rouge; but, at my age,



any appearance of solicitude about complexion is absurd, and therefore I remain where age and former ill-health have brought me; and rejoice that I enjoy the comforts of health, though deprived of its pleasing looks."

(To Mrs. Robinson):—"Tunbridge Wells, 1778. . . I love London extremely, where one has the choice of society, but I hate ye higgledy-piggledy of the watering-places. One never sees an owl in a flock of wild-geese, nor a pigeon in the same company as hawks and kites. I leave it to the naturalists to determine on ye merit of each species of fowl. All I assert is, that Nature has designed birds of a feather should flock together. On the menagerie of the Pantiles there is not so just an assortment. However, I have been fortunate now in finding Lady Spencer, Lady Clement, Mrs. Boughton, Mr. and Mrs. Wedderburne, and many of my voluntary London society here. There was a pretty good ball last Tuesday; and Lady Spencer and the Duchess of Devonshire were so good as to chaperone Miss Gregory; so I did not think it necessary for me to sit and see the graces of Messrs. L'Epy Valhouys and Mlle. Heinel exhibited by the misses. I understand that there are not above three dancing men, and the master of the ceremonies makes one of this number."

"Minuet-dancing is just now out of fashion; and, by the military air and dress of many of the ladies, I should not be surprised if backsword and eudgel playing should take place of it. I think our encampment excellent for making men less effeminate; but, if they make our women more masculine, the male and female character, which should ever be kept distinct, will now be more so than they have been."

(To Mrs. Robinson):—"Sandleford, June ye 13th, 1779. . . As I had not been to Bath since the Circus was finished and the Crescent began, I was much struck with the beauty of the town. In point of society and amusement, it comes next (but after a long interval) to London. There are many people established at Bath who were once of the polite and busy world, so they retain a certain politeness of manner and vivacity of mind which one cannot find in many country towns. All contracted societies, where there are no great objects of pursuit, must in time grow a little narrow and *wa peu fade*; but then, there is an addition of company by people who come to the waters, from all the active parts of life, and they throw a vivacity into conversation which we must not expect from persons whose chief object was the *odd trick*, or *sans prendre*. Cards is the great business of the inhabitants of Bath. The ladies, as is usual in little societies, are some of them a little gossiping, and apt to find fault with the cap, the gown, the manner, or the understandings of their neighbors."—*Dr. Doran's "Lady of the Last Century."*

#### DIAMOND-DIGGING AT THE CAPE.

##### THE CAMP.

The nearer we drew to our journey's end, the more busy became the road. Carts passed every five minutes, many of them handsome vehicles, and handsomely horsed. Empty wagons lumbered by, on the homeward journey. There was no chaff. Passers-by paid no more attention to each other than in London streets. Yet many of them were colonial born, arrived within very few weeks from some distant farm, where a strange face is the rarest of all chances. So quick is a man's education to self-dependence in a prosperous and democratic community.

On a sudden the driver pointed with his whip—"New Rush!" he said, calmly, and flected the wheeler's neck. We looked out

in great excitement. Far off, on a low swell that reached our horizon, appeared a broken crest, faintly white against the sky. No towers or pinnacles, such as one dreams of in a fairy city. Only a white sheen of tents along the ridge. A few yards more the sight was lost, behind a dip in the plain apparently so level. Another rise, and it was seen again, defined more clearly. So on, lost and regained alternately, with every glimpse more dingy and more broken, until the pale-gray mounds of "sorted stuff" came into view. Then lonely little camps occurred, consisting perhaps of a family wagon with two or three gypsy-tents around, and little heaps of white soil; the whole encircled with a six-inch ditch, and a fence, maybe, of thorns. These are mostly occupied by boers, who carry their stuff home for wives and children to "sort." Farther on are more pretentious dwellings, houses of canvas stretched on wooden framework, with neat windows cut in them, bound with colored braid or ribbons round the edge. Many of them stand upon a pavement of nodules thrown from the sieve, about the size of marbles or under; it is not very rare to pick up a diamond under one's feet on these platforms. The mounds of "sortings" are now close by, thronged with busy men, black and white. Our road, however, is still the *veldt*. Wherever no tent stands, nor hole is dug, nor heap of sand conceals the soil, the thin, dry grass appears, with trefoil-leaves of cassia, and vetch-like, golden flowers. It is thus even in the busiest street, where houses are of wood or metal. One never can forget that all this great town has no longer history than of three months, nor expects to exist for twelve months more. Ruins it has in plenty, however; poor, old, broken tents, rusted and rotted sieves, holes abandoned. At every step one kicks aside the bones of oxen. Vile smells assail the nose. An utter recklessness of decency is one of those camp-features which most speedily impress the visitor.

Through the straggling purlieus of the place we trot, with crack of whip and warning shout. The roadway swarms with naked Kaffre and brawny white man. Dressed in corduroy or shoddy, high-booted, bare as to arms and breast, with beard of any length upon their chins, girt with a butcher's-knife on belt of leather—one could not readily believe that among these bronzed fellows might be found creditable representatives of every profession. The road-way grows snowy white. Our wheels sink in "diamondiferous sand," brought from a depth of fifty feet. Piled up on either hand, it narrows the road to the last inch. We seem to be in a "cutting," ten feet deep. Above us, on each side, the sieves are endlessly at work, throwing a cloud of poisonous dust upon the wind. Screened from the merciless sun by an old umbrella, sits the master of the claim, "sorting." His arm goes regularly to and fro. Our view is bounded by the close horizon of these artificial hills, save, here and there, the mound falls back to give a "canteen" place for plying trade. The work of diamond-digging is all going on within ten yards of us. The "claims," the pits whence comes the "stuff," lie on the right, shielded by the barrier of their own produce. The treasure-bearing sand is borne past us each moment, in screaming bullock-dray, and mule-cart, and sack and bucket of the Kaffre. It goes to those solitary tents outside. The vehicles are pushed half up the hill to let us by. We approach the business quarter. Banks lower. The excavated road becomes a street. Wooden houses show themselves, all hung about with miscellaneous goods. Broadcloth and snowy *puggaries* are seen. Thicker and thicker stand the tents, closer presses the throng. A din of shouts and laughter fills the air. We pass large drinking-shops full

of people; negroes go by in merry gangs. One stares amazed at such a crush of dwellings, such a busy, noisy host. One more sharp turn, and the market-square opens before us, with Main Street on the right.

An anticlimax ridiculous. Brimful with astonishment, one reaches this point of view, and all the wonder disappears. It was the confusion, the "jam," of dwellings that so amazed us new-comers. Market Square and Main Street are as regular as mathematics can make them. The former is an immense expanse, set round with buildings, wooden, metal, and canvas. Great gaps intervene among them, for the instinct of trade does not approve the situation chosen for its centre. Main Street is the favorite site. Here are great warehouses one story high, pretty frame tents of "diamond-koopers," neat canteens, and luncheon-bars. There are glass windows in abundance, set in the walls of plank and iron; well-dressed people form one-half the crowd; the street is thronged with passenger-carts, many of them really handsome vehicles, with fine horses. Perhaps all this fixed order and arrangement is more justly marvellous than the pell-mell outside; but it does not so much impress the visitor. The oldest of these big stores has not three months' existence yet, but the blistering sun and grinding dust of Africa have given them an ancient, rusty look. There is little of the "camp" visible as one glances up and down the street; but behind, within arm's length of their neat back windows, the jumble of tent, and hole, and Kaffre-shed, and cart, and tethered horse, and rubbish-heap, spreads out again. At the upper end those white mounds bar the view, with the busy, seething population upon them and behind.

##### MANNER OF WORKING.

The method of working is the same identically at all the four dry diggings. Diamonds are found there in two qualities of soil: first, in the surface-sand; and second, in a whitey-gray, nodulous, limey earth, which Mr. Dunn describes as "tufaceous limestone." This is found in layers, at different depths. Between them are strata comparatively unproductive, but the prudent digger passes nothing by unsorted. Gems are discovered in the most unlikely matrix.\* In some parts of each *kopje* the surface soil is found to be very rich; in other parts much less so; but the digger, of course, relies on his tufaceous limestone. It is dry and gritty, mostly knotted up into cakes of all sizes, from that of a walnut downward. When adhering in a larger mass, it often has sufficient elasticity to resist considerable pounding, and such rebellious lumps are thrown aside, used for the building of walls and such-like purposes. The smaller pieces, and those broken up with ease, are loaded in carts, piled in sacks and buckets, or conveyed by some means to the sieve. They are first passed through an instrument of coarse mesh, which throws out the larger lumps. For the fine sieve the form of a parallelogram is found most useful on the fields. It is about three feet long by eighteen inches broad, with a stout wooden frame, and a bottom of perforated zinc or iron wire. At one end are two handles, made by elongating the sides of the frame. The sifter fixes in the ground two posts; to these he suspends the end of his sieve by a rope at each corner. Grasping the handles, to hold it horizontal, he directs the negro to pile on a heap of "stuff." He then, with an easy and untrifling motion, works it about upon the sieve, backward and forward. The nodules

\* I use this word matrix to express the substance in which diamonds, at the Cape, at least, are actually found, and where, as I feel sure, by Nature's alchemy, whatever that was, they were crystallized.

grind against each other, and mostly break. The finer parts fly off in a cloud of villanous dust, or drop beneath through the meshes of the wire. When nothing is left but the dry little lumps, like fine gravel—and the diamonds—he unhooks the sieve and carries its contents to a neighboring table, on which it is poured before the panting "sorter."

This part of the business is the most important and the most delicate. A man may dig and sift in vain, if the sorter be incapable or untrustworthy. No mechanical ingenuity will help him in his work; it must be carried out with mere patience and vigilance. His table ought to be about three feet by two feet six inches, perfectly smooth, and fitted with a rim round three sides; but tables are expensive articles out yonder, and a few boards nailed together often give results much more pleasant to view than any beautiful upholstery. Such as it is, the sorter seats himself beside it, armed with an iron scraper, six inches long and two or three wide. With this he helps himself to a convenient quantity of the stuff, spreads it out before him, and turns it off the board. The operation is done in three motions of the elbow, taking from the heap, spreading, and throwing away. An experienced workman, who has confidence in his eyesight, performs these acts with wonderful quickness and regularity. His arm seems to move like a machine. Although there is great abundance of mica in the gravel, flakes that shine in the sunlight more brightly than diamonds, you will scarce ever see him pause in doubt.

By the mode of searching I have detailed, it is quite evident that very many diamonds are lost. . . . But the most serious of all these losses is that caused by the big nodules I have mentioned. These will vary in size from the diameter of a man's fist to that of his head. Hundreds are daily thrown away, of a capacity to enwrap a thousand-carat jewel—ay, or a five thousand! The roads at New Rush are lined with them like a parapet. They are built up as a wall to keep back the mountainous heaps of sifting. They are piled round tents to block out the draught, erected into cattle-kraals. In short, every purpose for which rough stones are suitable is there supplied with "lumps." This would be the most incredible of assertions to me had I not seen its truth with bodily eyes. There is not one among the diggers there who does not know better than most people what his building materials may perhaps contain. Were he so inexperienced, the first heavy shower would give him cause to suspect the truth, for he would see all the loafing population bent in earnest scrutiny of the sopped earth, and he would shortly hear of treasures picked up, perhaps at his own tent-door. But no one is so ignorant. Every man knows that the fortune he is seeking may lie hidden in that dirty ball he tosses from him with a curse. And yet he tosses it! If a blow of the spade, a kick, and a few hasty thumps against the ground do not shatter the lump, he lets it lie. Comes heavy rain, and from out the mass dissolved rolls forth a monstrous gem, picked up, most likely, by a "masterless" Kaffir, or an idle follower of the camp, in open road-way. Or long exposure to the sun will make it friable, and then some passer-by, with careless kick, will get the prize. Every day such incidents occur. The newspapers are full of them. Schemes there are always afoot for "washing out" these nodules, a process than which nothing could be simpler. It is in human nature that the men who would not pick out the treasures at their door should yet object to others picking them. The diggers of New Rush are no so greedy. I caused the question to be put to many—whether they would allow myself and partners to cart off their "lumps." Not only was permission granted, but some fellows actually offered to load the cart if I should send it

round. Any thing to get rid of those "d-lumps!" During the heavy rains which swelled the rivers in the month of January last, two men came from Hebron with their cradle, and washed out as much as they could carry. The result of one day's work was thirty-three diamonds! The size we did not hear, but it was apparently such as to content these enterprising fellows. Next day they vanished, leaving their cradle in the veldt, and the place of them was known no more upon the fields, whether wet or dry. But to this day the lumps continue to be thrown out with rage.—"To the Cape for Diamonds," by FREDERICK BOYLE.

#### HEROISM.

I must protest against a misuse of the words hero, heroism, heroic, which is becoming too common, namely, applying them to mere courage. We have borrowed the misuse, I believe, as we have more than one besides, from the French press. I trust that we shall neither accept it, nor the temper which inspires it. It may be convenient for those who flatter their nation, and especially the military part of it, into a ruinous self-conceit, to frame some such syllogism as this: "Courage is heroism: every Frenchman is naturally courageous: therefore every Frenchman is a hero." But we, who have been trained at once in a sounder school of morals, and in a greater respect for facts, and for language as the expression of facts, shall be careful, I hope, not to trifle thus with that potent and awful engine—human speech. We shall eschew, likewise, I hope, a like abuse of the word moral, which has crept from the French press now and then, not only into our own press, but into the writings of some of our military men, who, as Englishmen, should have known better. We were told again and again, during the late war, that the moral effect of such a success had been great; that the morale of the troops was excellent; or, again, that the morale of the troops had suffered, or even that they were somewhat demoralized. But when one came to test what was really meant by these fine words, one discovered that morale had nothing to do with the facts which they expressed; that the troops were in the one case actuated simply by the animal passion of hope, in the other simply by the animal passion of fear. This abuse of the word moral has crossed, I am sorry to say, the Atlantic; and a witty American, the other day (whom we must excuse, though we must not imitate), when some one had been blazing away at him with a revolver, he being unarmed, is said to have described his very natural emotions on the occasion, by saying that he felt dreadfully demoralized. We, I hope, shall confine the word demoralization, as our generals of the last century would have done, when applied to soldiers, to crime, including, of course, the neglect of duty or of discipline; and we shall mean by the word heroism, in like manner, whether applied to a soldier or to any human being, not mere courage; not the mere doing of duty, but the doing of something beyond duty; something which is not in the bond; some spontaneous and unexpected act of self-devotion.—Charles Kingsley, in *Cornhill*.

#### OUR PERSONALITY IN DREAMS.

One remarkable thing as to the stuff of our dreams is well worth a moment's consideration—and it is this: Of whatever stuff we are ourselves made (so far as regards our moral constitution and character, that is), of such stuff our dreams will assuredly partake, in a very great degree, whatever may be the forms and phases—grotesque and ridiculous, or awful and solemn—under which they occupy the mind in sleep. It has been frequently

asserted by writers on this subject that the dreamer is at one time brave as a lion, at another a mere poltroon—at one time a knave, at another a saint, etc., etc. But all such descriptions are false and baseless—the moral individuality undergoes no change in dreams. The coward never dreams that he is valiant, or the brave man that he is a coward; the sordid man has no generous emotions in the land of shadows, nor does the free-handed, hospitable man become a churl in his sleep. The dreams of the miser will never be visions of self-sacrifice and benevolence, nor those of the base, mean, and impure, be a whit more noble or elevated than the acts of their waking hours. It is true that in dreams we often acquire wealth, honor, dignity, reputation, or power; in fact, we may, and it is likely enough that we do, in our dreams realize, as it were, in the course of our lives, all those various longings and ambitions which we are in the habit of picturing to ourselves in those waking myths and day-dreams in which all men, from the necessities of their nature, indulge more or less. But, throughout all these changes, endless as they are, the moral individual remains the same, and cannot, or will not, undergo a moral change. Again, in dreams we never lose our personal identity: one man never dreams that he is another man, and, though he may dream that he is two men, or ten men, or twenty, yet each and all of these will be none other than himself, multiplied he knows not how. From these considerations and others which they have a tendency to suggest, it would appear that we have ourselves a part to play in furnishing the stuff of our dreams. To what extent we are ourselves the creators of our dream-life may perhaps be shown in subsequent chapters.—*Leisure Hour*.

#### PARASITIC GROWTHS IN WINE.

When wine becomes acid, it has been invaded by the flower of vinegar, *Mycoderma aceti*, the function of which seems to be to transform alcohol into acetic acid by a sort of incomplete combustion. This has been seen into by most house-keepers, when they give the name of *mother* to the membranes found in jars which have contained vinegar; and a rapid way of making vinegar has been based on this observation. Another analogous mycoderm, the flower of wine, does not occasion any hurtful fermentation, but seems rather to favor the reaction due to what is called the "bouquet." A worse malady has for its cause a growth which presents itself under the appearance of filaments of extremely slender aspect, and forms those slight waves which may be remarked when wine is shaken. This mycoderm has a strong affinity with that which produces lactic acid. Wines that are described by the growers as fat and oily, are charged by a fermentation which takes the form of globules joined together in a kind of entangled chaplets. What they call an old or bitter taste, is a malady which chiefly attacks the finest wines, and also has its origin in a special fermentation, which reminds the palate of wine turned acid; under the microscope, the floating particles are larger, and resemble the branches of dead trees. If the germs of these different mycodermes are killed by heat, the wine is safe from all change so long as it is kept in a closed vessel; but it is evident that these precautions are useless if new germs are brought with the air, or in unprepared wines, which may be mixed with that which has been heated. After many experiments which have been made by the wine-growers of Burgundy, it is decided that it is well to heat the vintages to the amount of from sixty to eighty degrees, if only for a minute, and that, instead of losing their aroma and flavor, they are in fact rather improved. For the same reason, a voyage to a hot climate has been recommended.

## EDITOR'S TABLE.

M. LITTRÉ is an Academician and a deputy; but he will be known to future generations mainly as the author of a great French dictionary. The announcement that the venerable *savant* has at last finished this work of his life, thus crowning the edifice of his ripe fame, will be received with satisfaction by the French no more than by all who take delight in reading the language of Bossuet, of Le Sage, of De Sévigné, and Chateaubriand. The dictionary consists of four quarto volumes, with nearly five thousand closely-printed pages; and the last word in "izzard" was concluded just before the close of M. Littré's seventy-second year. Mr. Gladstone, somewhere in his commentaries on the Greek classics, tells us of a quaint Greek scholar, who spent the whole of a long life in studying a single word in the "Iliad;" somebody else has spoken of those "who concentrate their life on the dative case." M. Littré has exhibited in his arduous labor a very different spirit. After a literary career of such eminence as to attract Sainte-Beuve to write a long *critique* on his life and works, becoming a zealous champion of Comte's "Positive Philosophy," and essaying his talents in the turbulent politics of the Orleanist period, this indefatigable student resolved to undertake a task on which the Academy had been engaged almost from the time of its foundation. It is literally true that this literary republic, which Richelieu founded, and which has always contained the leading scholars and scientists of France, has been trying for centuries to complete a dictionary of the French language. Rumor has it that the "Immortals" have yet to reach the formidable letter "R;" malice on the part of non-academicians hints, that the millennium will find them on their knees, begging that the end of the world may be postponed until they have at least touched off "T." A witty English writer surmises that the dictionary of the Academy is a sort of philological myth—that it is the "Mrs. Harris of the schools." One of the "Immortals," however, has proved himself greater than all; for Littré's dictionary is cordially hailed by the lettered world as filling the gap, the existence of which brought the Academy into being. But M. Littré is much more than a maker of colossal dictionaries. He has created a sort of literary empire of his own, over which he seems to rule with truly patriarchal authority. He has been an intellectual power in France for thirty years, and such men as Sainte-Beuve, Taine, and Michelet, have held him in filial reverence. He has all the simplicity, as all the magnetism of genius: no man ever bore a reputation more spotless, or exhibited a more quiet or efficient charity and kindness to all his kind. In 1848 he was a republican because he found in the republic a Utopia of good-will,

peace, mutual help, and the final overthrow of caste, privilege, and kingly, people-crushing ambition. A small, quiet man, he sits in the Versailles Assembly, never opening his lips, but constant in his attendance, and watchful of every proceeding; in the Academy he is the recognized leader of its liberal section, but is so reticent as almost to be un-French. When, five or six years ago, he was chosen to his *fautail*, the irascible Bishop Dupanloup, of Orleans, resigned his membership in high dudgeon, refusing to sit beside an apostle of Comte, and the translator of Strauss's "Vie de Jesus;" but even the heat of the eloquent prelate could not blind him to Littré's singularly attractive character, and his sense of justice compelled him to yield, while strenuously opposing Littré's election, a generous tribute to his purity and genius. Littré's position is all the more honorable, in that he lives in a state of honorable poverty. His lodgings are of the humblest, his food of the plainest, his retirement from the brilliant society in which he might move and shine a rule of his life. He refused the decoration of the Legion of Honor, and a pension, at the hands of Napoleon III., and has more than once given up opportunities of fat professorial salaries, in order the more completely to devote himself to his work of zeal and love. Such a character is rare in this "age of brass," and especially in France, where genius is prone to plume itself, and craves commonly to stand continually in the public gaze.

— The Parsee community of Bombay has lately been stirred to its uttermost depths by a circumstance which, to one not "to the manner born," would seem to be of but a trivial nature. A Parsee lady, the wife of one of the most wealthy and influential members of the sect, appeared with some English ladies at a private concert given in the city, and sang the well-known song entitled "Her Bright Smile haunts me still." This event, says the *Bombay Gazette*, caused a great sensation among her caste, young Zoroaster highly approving the courage of the lady who thus assimilated and fraternized with her English sisters, while old Zoroaster, represented by the Parsee newspapers, is furious and insulting, venting his displeasure in very unbecoming language. This is but a single manifestation of the social and political feud which, for a number of years, has divided the Parsee community of Western India. This sect, which numbers about a hundred thousand souls, among whom are many of the wealthiest and most intelligent of the native population in and around Bombay, is represented by two distinct wings, which we may call Conservative and Liberal, each professing equal devotion to the faith of their great teacher, but differing in the construction of its tenets. The conservative believes in a strict adherence to all the ancient customs and observances, however much they may be behind the spirit of the age. For instance,

he insists upon taking his meals in the good old-fashioned way of his fathers—squatting on a mat beside his copper platter, raised about three inches from the floor, and helping himself with his fingers. He observes strictly all the rites and purifications enjoined by his religion, says his prayers sixteen times each day, will not eat food cooked by a person of another faith, and keeps his wife and daughters in ignorance and seclusion. The liberal, on the contrary, believes in conforming to modern progress, and lives like an English gentleman, as far as Eastern necessities will permit. He advocates the abolition of some of the disgusting ancient usages, the reduction of the number of obligatory prayers, the education of women, and their admission into general society. It is next to impossible for us, with our Christian notions of equality, to appreciate the courage necessary for a woman to separate herself from her caste, as in the instance above quoted, and go into European society. A few years ago it meant ostracism and degradation, and it still means so among those who cling to the ancient traditions; but, thanks to the enlightened movement among her countrymen, the lady will have many who will support and encourage her in her innovation. Caste observance, which really has nothing in common with the religion of Zoroaster, but was borrowed from the Hindoos, has received its death-blow among the Parsees; and that enlightened little community, whose fathers came out of Persia more than a thousand years ago, will soon aid by their example in breaking the shackles which so long have bound their adopted country.

— Fashions in England usually descend from the upper to the lower strata of society. My lord's hat and boots are observed and copied by his banker's clerk; my lady's latest imported *coiffure* usually reappears in no long time on the head of her maid's married sister. But one recent fashion, beginning among the lower classes, seems to be reversing the law of gravitation, and is creeping up in the social scale. It is that of striking for higher pay. This new movement of labor has hitherto been confined to journeymen butchers and gas-stokers, Brummagem mechanics and farm-laborers—people who are servants of the despised class who have "gone into trade." But now her majesty's civil servants—all of whom by being such become entitled to the vague but envied rank of "gentlemen"—have sent in a respectful appeal for increased salaries, not without hints that, unless their demand is acceded to, her majesty's civil service may be deprived of the valuable services of some of them! Younger sons of marquises, the scions of anciently-descended shabby gentility, brothers of fat country rectors, heirs of deceased Indian generals, *protégés* of dukes, and pets of prime-ministers, have thus been learning a lesson of their humbler fellow subjects;



and the hope of gaining a few additional guineas a year suffices to make these aristocratic gentlemen, who spend their lives among docketts and red tape, and red-lined folios, by blazing wood-fires in the staidly cosey regions round about Whitehall, swallow their pride and fall into the swelling line of men on strike. It is admitted by the London papers that the salaries of most of the civil servants are insufficient; but Mr. Lowe, Chancellor of the Exchequer, who is as parsimonious of the nation's money as if it were all his own, and he were possessed of an insane fear of dying in a pauper's ward, turns a deaf ear to the appeal. In vain is it pointed out to him that since the civil-service salaries were fixed, prices of the necessities of life have risen in London from thirty to forty per cent., and that therefore they are really less by that percentage than they were twenty years ago. Mr. Lowe quietly replies that he can find plenty of people who would be glad of the places at their present incomes; whereon it is retorted on him that there are a good many men in the city who would take the chancellorship of the exchequer for much less than five thousand pounds a year. Public servants should be paid well; and it is to be hoped that our own government will establish this principle when civil-service reform is fully considered, for by good salaries and security of tenure the temptations to fraud will be infinitely diminished, and competency in official duty almost certainly insured.

### MINOR MENTION.

Considerable exception has been taken by chemists to Wendell Phillips's assertion, in his lecture on "Lost Arts," that modern science cannot make colors of such vividness and durability as those used in the frescoes of Pompeii. The fact is undoubted that modern colors, though at first very vivid, fade into dulness in a comparatively short time. This, however, does not result from lack of knowledge how to make enduring tints, but from want of will. Our modern colors are made with water; the ancient were worked by fire-processes, which, though perfectly familiar to the chemist and the manufacturer, are undesirable, because costly. And, as there is no special desire in any quarter that the colors used in frescoing should be perpetual, the point of competition is cheapness of fabrication. From this cause, one paint alone is manufactured by a fire-process—ultra-marine, which is notably the dearest color, save carmine, that is made. The cost of the latter is great for two reasons—one that there is some secret about it, and another that it can only be made in a pure, pellucid atmosphere and on a bright, sunny day. With due deference to the great lecturer, the ability to make bright, permanent colors must be omitted from his catalogue of the "Lost Arts," for it is precisely one of the points in which modern superiority is incontestable.

The authorities have, with commendable liberality, placed the navy at the disposal of Messrs. Pierce, Henry, and Sands, who are charged with the American share of the transit observations of Venus, which are to be taken on the 4th of December, 1874. Congress has awarded for the purpose a sum of one hundred and fifty thousand dollars, to cover the unavoidable expenses of taking up positions in the two great belts of observation to be formed in the Northern and Southern Hemispheres. From European observatories, parties will be sent to Palestine, Persia, Straits of Bab-el-Mandeb, Hindostan, Peking, and Yeddo, besides thirty-five stations in Siberia, furnished by Russia. In the Southern Hemisphere England provides stations in South Africa and Australia; and France has scientists destined for Réunion, Campbell Isle, New Caledonia, Honolulu, and Nukuheva. It is probable that the gap in South America will be filled by Americans, but on this point the leading astronomers are now in consultation with the Coast Survey Department.

At this season of the year beware of the professional gardener—he who goes about with ladders and saws intent upon the dismemberment of trees. Don't admit him into your orchard; stand on guard before your shade-trees. But if, under necessity, you do permit the fellow to lay hold of your grape-vines, and assail the spreading branches of your trees, watch his doings zealously, and by timely interposition prevent the utter destruction of your favorites. Teach him that pruning a tree does not mean stripping it to the trunk. It is just possible that art may occasionally step in to aid a tree in its symmetrical development; but we believe that, as a rule, a tree knows how to grow, and that the interposition of saw and pruning-knife is simply a presumptuous piece of impertinence. Very certainly this interposition is often a death-warrant, as every one who has watched our public parks has discovered. A few days since, in passing Dr. Muhlenberg's church, in this city, which hitherto has stood in picturesque seclusion amid its grove of willows, we found the Vandals had been at work, and every tree was cut down to its bare trunk. A lover of trees, who in the abundance of his indignation should have slain one of the ruthless despoilers, would have been acquitted by all the world as guilty of nothing more than justifiable homicide. Of course, the willows at Dr. Muhlenberg's will die; for in other similar instances—witness the case of the willows formerly in Washington Square, and those once overshadowing old St. Mark's—the trees subjected to the dismemberment of professional gardeners have invariably succumbed in consequence of the treatment.

The arts of our undertakers have long amazed the European visitors to our shores. The motive that prompts a display of coffins and caskets in shop-windows, that seeks to render the appurtenances of a funeral picturesque and captivating, is a puzzle which the "daintier sense" has long been unable to solve. But in an undertaker's window in this city is an outburst of emotional art that far outstrips the customary display of satined and silver-nailed coffins. This is a large picture upon the window-shade, displaying a

grave-yard. By a newly-erected monument kneel three children. From the eyes of the elder, a girl, fall two large—very large—pearly tears, which hang in globular conspicuousness upon her cheeks. The other children are prostrate in mourning attitudes. Upon the tomb is an inscription—"Our father and mother." To the inquisitive wayfarer the question naturally arises as to the dealer's purpose in advertising his business in this sad and tearful fashion. Does he hope to develop trade by holding up inviting prospects of picturesque mourning? Will people rush in and order coffins and funeral paraphernalia because of their sympathy with these bereaved ones? What dramatic and emotional instincts are there which, being aroused, seek gratification in an undertaker's commodities? Apart from advantages to his trade, does this coffin-maker seek to assuage the grief of the passer-by by his pathetic picture, or to awaken the healing wound to fresh emotions? Or does he gratuitously present the public with this art-display because of his delight in tragedy, because of his professional fondness for the sorrowful, because his mind, long weaned from scenes of joy, can discover nothing in life worthy of contemplation but well-ordered and well-expressed tears?

Some of the English journals of the last week in December assail the festivities and customs pertaining to Christmas. The idea that Christmas has upon Christians a peculiar moral influence is derided as a popular delusion; the attempt to keep up the old notion that Christmas is a time of jollity is considered comical; and the sentiments of kindness and good-will uttered and invoked at this festivity are declared to be shams. No doubt, *Masé* people, who have exhausted all the possibilities of sentiment, and tested all the resources of pleasure, find weariness and disgust in a set period for festivity, but not so the great bulk of the overworked masses, to whom holidays come with refreshing change. "So catching is enthusiasm," says one of the English journals, "that probably most of us will be led away into the belief that we are happier than usual, and more than usually justified in taking things in a cheerful light." But this enthusiasm must, in the first place, have a genuine origin, in order to communicate itself so freely; and, even if it prove to be merely a delusion, assuredly there is comfort even in temporarily believing ourselves to be happier than usual. Some of the delusions of life give it its greatest relish.

The old contest between Cavaliers and Roundheads has been renewed in London with almost all the bitterness which marked the original struggle, although, so far, there are no accounts of bloodshed. At one of the theatres a play by Mr. Wills, entitled "Charles I.," depicts the "martyr king" with every qualification of virtue, and Cromwell as a coarse and despicable barbarian. This poetic license having been accompanied with no little dramatic skill, the play has been a marked success. The critics have discussed it at length; the theatre has been filled nightly with adherents of each historical faction, who have received the sentiments of the play with a hot contest of applause and hisses; and the

literary and dramatic world have been filled with turbulent discussions. As an offset to this glorification of Charles, a five-act play, called "Cromwell," has been produced at another theatre, which gives the Lord Protector the fulness of his due, and sets forth the king in all those detestable colors in which his enemies have always delighted to paint him. But "Cromwell," as a dramatic composition, has failed to please; so the royalist party are in high glee, and republicanism, so far as the theatre is concerned, is temporarily under an eclipse.

— A rich feast for the London antiquaries has just been prepared by the publication of a number of historical documents, which have lain for centuries among the archives of old English families. Several years ago a commission, comprising such men of literary and antiquarian repute as Earl Stanhope the historian, Dr. Dasent, Lord Houghton (R. Monckton Milnes), Lord Romilly, and the Marquis of Salisbury, was appointed to make examinations into all manuscript treasures in the possession of private persons, which they could reach. The commission, after devoting itself patiently and *con amore* to the work of examining and arranging the documents, has given them up to public curiosity. Among them are letters of Lady Arabella Stuart; a list of the fare provided at a dinner given by Queen Elizabeth to her "most honorable Privy Council" (the total expense of which was £75 16s 4d); a letter of Mary Queen of Scots to Lord Lennox, the father of Darnley, to whom she complains of the ill terms upon which she is living with her husband; a letter written to James I. warning him of the gunpowder-plot; and manuscript lucubrations of Buckingham, James I., the Charleses, Claverhouse, and other not less historic characters. The advantage derived from these publications will be valuable to future historians, though in many cases the documents published were placed at the disposal of Macaulay, Mahon, and Froude; and it is gratifying to know that the exclusive spirit which has hitherto kept them shut up from the world's knowledge is yielding to the demands of the inquiring age in which we live.

— Berlin appears to be reaping consequences of the late war similar to those which have marked our American cities. A pamphlet recently published in Germany, entitled "Berlin's Moral and Social Condition," gives any thing but a flattering picture of the capital city of the new German Empire. Out of a population of eight hundred and thirty-three thousand, one hundred and twenty-five thousand are receiving public charity. In 1867 nine per cent. of the population lived in cellars, and twenty per cent. in crowded apartments. Since then two hundred thousand souls have been added to the population, and rents have increased greatly, so that the poor are compelled to pay nearly half their earnings for decent shelter, and numbers have been forced to sleep out-of-doors. It is said to be dangerous to go through the streets unarmed, because of the increase of the rowdy element, and petty riots and conflicts with the police are frequent. More than half the

population are working-people, and the city has become the centre of the socialistic movement. Many of the workmen also openly favor community of wives. Divorces have increased to ten per cent. of the number of marriages solemnized. The attendance at the churches has decreased to one per cent. of the adult population, and, of twenty-three thousand funerals in 1870, nearly twenty thousand were performed without any religious ceremonies whatever. Women flock by thousands to Berlin to obtain employment, and, failing, large numbers fall into shame. This evil has become so great that strenuous efforts have been made to avert it. It is proposed to alter the tutelage laws so as to extend protection to girls up to the age of twenty; to establish lodging-houses and benevolent institutions to aid working-women, and to form a society of ladies charged with protecting, sustaining, and counselling women up to the age of thirty-five.

— Mr. Charles Reade is said to draw largely upon newspaper records of the events of the day for the framework of his fictions, and certainly they afford ample material. Take, for example, the Stokes case. What a field it offers as a study for a story in skilful hands! The amazing career of Fisk; his rise from the rough life of pedlerism to all the sumptuousness that money in the nineteenth century could supply; the steps by which this was achieved; the wiles and machinations of Gould; the plots and counterplots; and at length the attainment of the keys of the New World's almost greatest artery. And then to dip into that nauseous private life of the successful adventurer—its splendid if vulgar profligacy; the intrigues with base beauties, ending with that which laid him dead, on the staircase of the Grand Central Hotel on that afternoon in January, by a rival who, too, could well fill the page of such a narrative—the profligate seductive and seduced flash New-Yorker, a typical man of his class, handsome, showy, and, in the eyes of a certain order of women, a paragon of manly beauty; condemned to die by the hands of the hangman, the verdict being given at midnight, the day-year of the murderous deed, amid the shrieks of women, the sobs of men, and a scene generally of surpassing excitement. What pictures will be told of this in after-days! How those who now are boys will tell their grandsons with warning voice of the days of Fisk and Gould—of those marvellous reprobates, with whose desperate expedients and gigantic grasping of gold, not merely our own country, but all Europe rung!

— And now to pass from New York to Paris. What a tale is that there unfolded of the ruin of another young man by a worthless woman! The story of young Duval and "Cora Pearl" has ten times the dramatic incident of "*La Dame aux Camelias*." What glimpses of the meretricious splendor of the Second Empire might here be afforded of the gorgeous orgies of the members of the Jockey Club, the career of such men as the Duc de Gramont-Caderousse, whose end was hastened by the excess of that most profligate period! In a word, what a brilliant chapter on *la vie Parisienne* of the epoch, and the

part played therein by American, Englishman, and Russian, as well as native, might flow from a graphic pen, leading to the special narrative of Duval and his mistress! The extraordinary fascination which this heartless Aspasia exercised over the wealthy *parvenu*, the marvellous pace at which he galloped, urged by her hand, down the road to ruin! How effectively might a subtle analyzer of feeling describe young Duval's emotions when, on the evening of his second repulse from her door, he, in the agony of his infatuated soul, walked the streets for hours, destitute, desolate, and despairing, utterly regardless of the pitiless, pelting rain! What could be more dramatically striking in its way to the scene where he once more goes to her door, bursts through the crowd of lackeys—he kept eight at her service—which barred his entrance, gained her boudoir, and then, after bitter recrimination, telling her that if she abandoned him he would destroy himself, made the fatal attempt? And then might come, reason, regret, repentance—and, in view of these, the curtain falls.

— New brooms notoriously sweep clean, and, from one of a quality so super-excellent as the new lord-chancellor (whilom Sir Roundell Palmer), much would naturally be expected. In this great officer is vested the most extensive, although not the most valuable, church patronage in his country. This is quite distinct from the patronage of the prime-minister. It has hitherto been usually bestowed on clergymen who had sufficient influence to be placed on the chancellor's list, but the announcement is now made that Lord Selborne intends to change all this, and simply make his selection from the most deserving he can discover. This will be good news, indeed, to some of those hopeless beings, curates of fifty and upward, who, with far better prospects in another world than most people, seem, poor fellows, to have next to none in this. The Mr. Crawleys and Mr. Quiverfuls, of Trollope's novels, may be discovered without much difficulty in real life. Since the abolition of the Irish Church Establishment, the value of livings has declined in an extraordinary degree. When the Duke of Norfolk's were some time since put up for sale—inasmuch as he, being a Roman Catholic, cannot present to them—so small a price was offered that they were withdrawn; and a batch put up lately in the east of England met a similar fate. This should be encouraging to Mr. Miall, the champion of the state-church abolitionists; yet, notwithstanding, there seems strong reason to suppose that he has had as yet but very slight success in undermining the massive foundations of the great structure he attacks, and it has lately become more than ever evident that from the arch-destroyer of the Irish Establishment he can expect nothing but opposition.

— A correspondent is of opinion that Professor Tyndall's "Forms of Water" is deficient in one thing—it should have a chapter on *tears*. But, as the professor is a bachelor, he has been naturally deprived of opportunities to study this variation of his subject.

## Correspondence.

"Don't" and "Won't."

To the Editor of Appleton's Journal.

DEAR SIR: Is *don't* really ungrammatical, even when used in the third person? May we not, in this case, regard it as simply the contracted form of the two words *does not*, just as *shan't* is of *shall not*? *Don't* and *shan't* would more correctly be printed respectively *do'n't* and *sha'n't*; but two signs of contraction in one word being typographically offensive, the first apostrophe has been omitted for look's sake, and hence, by common consent, we have *don't* and *shan't*.

*Won't*, though not objected to by Carl Benson, appears to be far more open to just criticism than *don't*. Is it contracted from *will not* or *would not*? As commonly used, it must be construed as from the former. "I won't go," means evidently "I will not go"—not "I would not go." On what principle, then, is *won't* formed? Why should the second letter be "o" and not "i"? and why not print and pronounce it *win't*, or, more correctly, *wēn't*? Probably, *will not* has been rendered, by the vulgar, *wull not*, and this has degenerated into *wunnat*, and *wunnat* has produced *won't*. At any rate, *won't* is euphonious, and forms a fitting rhyme for *don't*, and both look better with only a single mark of contraction.

TAM.

We cannot see that "does not" readily contracts into "don't," while "do not" obviously does; and, in a majority of instances where the term is used, it is employed as a contraction of the latter phrase. To use "don't" either for "do not" or "does not," is obviously confusing, and it cannot be sanctioned so long as there is a contraction at hand for "does not"—that is, "doesn't"—which is accurately derived from the parent phrase.—ED. JOURNAL.

## Literary Notes.

THE "Miscellaneous and Posthumous Works of Henry Thomas Buckle," edited, with a biographical notice, by Helen Taylor, has appeared, in three large volumes, in London. With the exception of several critical papers, that have already been published in this country, it is largely made up of fragments from his journals and commonplace-book. From the biographical sketch, by Miss Taylor, a few interesting facts in the career of the great author are gleaned. Buckle in his childhood was feeble and delicate; he had no pleasure in the society of other children, but would sit for hours at his mother's knee to hear the Bible read. His taste for literature was greatly stimulated by the early reading of "The Arabian Nights." The only game he cared for was that of playing at parson and clerk, as he called it, himself being preacher. His father died in his nineteenth year, and, shortly after (1840), he made the tour of Europe with his mother, during which time he devoted himself to the study of languages. At twenty-one he conceived the idea of a "History of the Middle Ages," which, ten years later, became transformed into the "History of Civilization." For ten years he studied and matured his plan, and six years were devoted to writing and rewriting, revising and altering, copying out and adding to his first volume. During all this time he lived alone

with his mother in London. Chapter by chapter his great work was planned with his mother, commented upon by her, and with her every speculation as it arose was talked over. But, in 1855, Mrs. Buckle was taken seriously ill, and, in 1856, she began to fear that she would never live to see her son acknowledged as the genius that she believed him to be. Earnestly then did she begin to urge him to bring at least one volume out. "Yet, to spare him, she never would betray in his presence the real secret of her growing impatience; only when we were alone," writes Miss Shirreff, from whom these biographical memoranda are mainly derived, "she would say to me, 'Surely God will let me live to see Henry's book.'" At length Mr. Buckle makes this note in his Diary: "June 9, 1857.—Looked into my Volume I., of which the first complete and bound copy was sent to me this afternoon." And he laid it before his mother. But the dedication to herself she was quite unprepared to find. And so great was her agitation, that Mr. Buckle afterward bitterly repented the rough act of thus laying the volume before her to enjoy her surprise and pleasure. "Even the next day," says Miss Shirreff, "when showing it to me, she could not speak, but pointed, with tears, to the few words that summed up to her the full expression of his love and gratitude." Very pleasant it is to read of Mr. Buckle's manner toward his mother having been marked by "exquisite tenderness, mixed with playful, boyish ways." Gladly and proudly did he at all times acknowledge that it was from her that he inherited his taste for metaphysical speculation, and that to her it was that he owed his love for poetry. It was her presence, too, that seemed to bring out all that was best in him. And we cannot, therefore, wonder that when, the year after the publication of his first volume, he was asked to deliver a lecture at the Royal Institution, he chose as his subject "The Influence of Women on the Progress of Knowledge." But, in the following spring, while he was occupied in writing his review of Mr. J. S. Mill's work on "Liberty," the long-dreaded blow fell at last. It is thus briefly noted in his Diary: "April 1, 1859, at 9.15 p. m. my angel mother died peacefully, without pain." That morning he had been occupied in writing his account of the Pooley case; and it was under the immediate impression of his loss that he composed what he calls "The Evidence of Immortality supplied by the Affections," which forms a later part of his essay on Mill. Soon after, he thus wrote to a friend: "I remain quite well, but my grief increases as association after association rises in my mind, and tells me what I have lost. One thing alone I cling to, the deep and unutterable conviction that the end is not yet come, and that we never really die. But it is a separation for half a life; and the most sanguine view that I can take is, that I have a probability before me of thirty years of fame, of power, and of desolation." Again, in November of the following year (1860), he writes: "I see too surely how changed I am in every way, and how impossible it will be for me to complete schemes to which I once thought myself fully equal. My next volume is far from being ready for the press, and when it is ready it will be very inferior to what either you or I expected." It was, however, published in May, 1861. But, his health then completely giving way, he laid aside—for a time only, as he thought, yet, in fact, forever—all literary work, and, toward the end of October, he embarked for Alexandria, setting out in search of new life in the East, but on the journey, as we now see, to his tomb at Damascus.

To describe Mr. Charles Dudley Warner's "Backlog Studies" by any conventional detail of its merits would need a critic of the coldest blood; and we are sure that one who would attempt it would be capable of trying also to explain why the pleasant old essays of the gentle Elia are so genial and human, and why the story of Colonel Newcome makes our hearts warm with an indefinable feeling. There are some books to be enjoyed rather than analyzed; and this, of all recent writings of home essayists, seems most to deserve to belong to the welcome class. It should be read before a fire; and its reader will inevitably fall into its mood, and judge it much as we have done. The worst that Mr. Warner's critics can say of him is, that his pleasant talk reminds one a little of the best writing of Holmes; but the fact that an essayist in some degree resembles another master of the art does not seem to us to detract in any way from his originality, since what charms us here is something that cannot be imitated, but must be inborn. The "Studies" are thoughts and talks—in no wise mere reveries—before a New-England wood-fire of the kind that is rapidly becoming only a thing to dream of. They are full of bright suggestion and excellent humor of the type that makes one well disposed toward all mankind. Mr. Warner's "Summer in a Garden" showed us some capital bits of kindly satire; but in this book he has given us better ones, that are fairly perfect. Here is one:

"The Fire-tender. You know that in Concord the latest news, except a remark or two by Thoreau or Emerson, is the Vedas. I believe the Rig-Veda is read at the breakfast-table instead of the Boston journals.

"The Person. I know it is read afterward instead of the Bible.

"Mandeville. That is only because it is supposed to be older. I have understood that the Bible is very well spoken of there, but it is not antiquated enough to be an authority.

"Our Next-door. There was a project on foot to put it into the circulating library, but the title 'New,' in the second part, was considered objectionable."

We enjoy Mandeville's dream less than the rest of Mr. Warner's book; yet that, too, has excellent points. We are disposed in this case, as often before, to think Mr. Hopkin's illustrations unworthy of the place public opinion seems generally to assign them; but this is not an opportunity for criticism of their merits. (Osgood.)

The *New-York Tribune* closes a long review of Darwin's "Expression of the Emotions in Man and the Lower Animals," as follows: "It will be perceived, from the account which we have given of a portion of the contents of this unique volume, that it possesses a greater degree of popular interest than most of the previous writings of the author. It embodies the results of profound research in a singularly fascinating form. Without the rigid methods of science, it combines scientific accuracy with agreeable illustration. It brings an immense store of facts to the exposition of a most attractive branch of natural history. The manner of the author is as remarkable for its simplicity as for its acuteness. Not a trace of pedantry or of pretension can be found in his candid pages. His mode of thinking is no less transparent than his style. He always challenges the sympathy of his readers, even when he does not command their convictions. His reasonings produce a strong impression of the essential rectitude of the highest specimens of the English mind. The charm of his expositions awakens a deep personal interest,



like that which is called forth by the utterly sincere teachings of his eminent countryman, Professor Tyndall. His speculations on the origin of man we are unwilling to accept with our present lights, but we rejoice to do honor to his descriptions of the phenomena of living Nature, which are as delightful as they are original and instructive."

The "Essays, Sketches, and Stories," collected from the writings of the late George Bryant Woods, of Boston (Osgood), are, for the most part, rather the timely and attractive notes of an able journalist on transient topics of every day than essays designed for permanence. At the same time, the collection has great value even to the general reader; for Mr. Woods was a careful and discriminating observer, and his comments will be of worth, as those of a clear-headed, carefully-trained contemporary writer, when the events and people and manners of which he wrote his daily sketches have passed, with lightning-like American rapidity, into history. To the many friends of the journalist, this volume will have a value quite distinct from that we have noted. Connected in their minds with a remarkably full and active life of only twenty-eight years, with a very earnest ambition and high aims, it will be a perpetual memorial of powers which they knew more intimately than Mr. Woods's short career permitted the public to know them. There is always something sad in a book which makes one feel that it merely shows the training of an author, and not the results which that training would have brought forth if his life had been spared. The admirable practice-school—for such, we believe, the writer deemed it—is shown us here; and it is enough to make us believe that Mr. Woods's death brought a loss we could ill afford in these sterile days.

"Beechwood," by Mrs. Rebecca Ruter Springer (Lippincott), belongs to a class of books which we dislike. Apart from the inevitable failure of the diary manner of narrative, unless employed by a master-hand, there is apt to be a mawkish sentiment in this introspective writing that repels us strongly. "Beechwood" is a book which constantly pleads for charity in the reader by the very fact that its author entirely believes in the views of life which she presents. We do not, and think we are fortunate in having the majority of mankind on our side. We are not willing to say what might not be developed if all girls should begin at fifteen, like the heroine of this romance, to keep journals; but we are convinced that the majority would show a healthier mind, less taste for sentiments of plaintive melancholy, and a desire for a more robust and forceful existence, than is depicted here. The book is written with sincerity, and in the evident belief that it is doing something to make the world better; and the writer has a claim to indulgence; but the story, we think, has not.

Mr. J. T. Trowbridge's sketches, "Coupon Bonds, and Other Stories" (Osgood), need no new introduction to the readers of the *Atlantic Monthly*, in which most of them first appeared; but for all who have never seen them, and for many of those who know them well, their publication in a volume is a great boon. Some of them seem to us among the very best—perhaps we may say, since Mrs. Stowe's writings have of late taken on a certain disagreeable mannerism, the best—sketches extant of certain phases of New-England life. "Coupon Bonds," and the irresistible "Man who stole a Meeting-House," are among these. A *propos* of this

volume, why does nobody read Mr. Trowbridge's "Neighbor Jackwood" now! The fact that slavery, on which its plot so entirely depends, is dead, and the very obvious faults the book had in the treatment of much of its more "sensational" side, do not prevent its being one of the best collections of New-England characters and scenes in the prolific literature of that "section" of the earth. Some of these later sketches recall its most telling points.

"The Clubs of New York," by Francis Gerry Fairfield, gives an account of the origin, progress, present condition, and membership, of the leading clubs, with "an essay on New-York club-life and photographs of leading club-men." Mr. Fairfield has exhibited industry in gathering together a great deal of information bearing upon the topic of which he treats, and he has shown skill in putting his material in form. A large part of the volume is gossip in character, and will afford entertainment to that class who like to obtain inside glimpses of social life in the metropolis. But, in aiming to gratify this curiosity, Mr. Fairfield as often draws upon his imagination as upon facts for his statements. He often makes unwarrantable use of names, and is somewhat too personal in his descriptions. There is as much impropriety in giving "photographs of club-men," as the descriptions are called, as there would be in publishing the particulars of a private party in a lady's parlor. (H. L. Hilton, publisher.)

"Bibliographia Catholica Americana" (The Catholic Publication-House, New York) is a carefully-prepared account of Roman Catholic works published in the United States, with biographical notes on their authors, by the Rev. Joseph M. Finott, a true bibliographer. He has accomplished this first part of his work—covering the period from 1784 to 1830, inclusive—with remarkable ability. Of the details and the accuracy of his volume we cannot, of course, pretend to judge; but the clear arrangement of its matter and the valuable information brought together in it are evident to any writer who is accustomed to need quick and thorough reference to books and authors.

"The Lost Found," by the Rev. Mr. Taylor, of the Broadway Tabernacle, is a little volume of sermons or didactic essays, the longest and most prominent having for its text the parable of the Prodigal Son. The book is free from the useless rhetoric which forms part of so many published sermons, and its earnestness of manner and sincere endeavor to teach seem to fairly entitle it to a large circulation among others than those interested in its author. At the same time, there is visible in it the same lack of real knowledge of the life led by the men the author wishes to reach, that so often renders the sincerest advice utterly unsuccessful.

"Garnered Sheaves" is the title of an edition of the complete poetical works of Dr. J. G. Holland (Scribner). "Bitter Sweet," "Kathrina," and "The Marble Prophecy," occupy the greater part of the volume; and some less familiar verses are collected at its end. The book is excellently printed, and its convenient size and attractive appearance will make it the most popular form in which to preserve the author's works. Its contents are all familiar, and need no new notice here.

Hans Andersen has sufficiently recovered his health and his eyesight to resume his literary labors.

## Scientific Notes.

THE *English Mechanic* of December 6th describes an ingenious instrument lately designed by Mr. Joseph Bonomi, and intended for use in military establishments, police-offices, and for physiological and artistic research. This device is entitled "an instrument for the identification of persons," and has been designed on the well-known law of proportion, laid down by Vitruvius, that "Nature, in the construction of the human frame, has so ordained that the measure of the distance from the extremity of one hand to the extremity of the other, when the arms are extended, should be the same as the measure from the top of the head to the sole of the foot." Without entering into a detailed description, this instrument may be described as consisting of two laths or narrow strips of wood, fixed at a certain angle against the wall of the examining-room. Upon each of these strips a movable strip is adjusted, so as to slide along grooves in their sides. The height is measured on the less-inclined lath by sliding its indicator down till it touches the head; while the extent of the arms is measured by bringing the indicator in the more-inclined lath to the tip of the middle finger of one hand, that of the other touching a vertical post or the wall at the side of the room in which the instrument is placed. Mr. Bonomi, with this instrument, measured eighty-four persons, male and female, and found fifty-four long-armed, twenty-four short-armed, and only six whose extended arms were exactly equal to their height. From these results it appears that, though founded upon the law laid down by Vitruvius, the instrument is dependent for its detective value upon the exceptions to this law; since, if all forms were correct in proportion, there would be no means of distinguishing between them. As it is, the human race may be divided into three classes for the purpose of measurement: those in whom the proportions are normal; those in whom the height exceeds the breadth, and *vice versa*. This law is therefore of great physiological interest, and also of great social importance, as it furnishes a method of personal identification of great value when taken in connection with certain other peculiarities—as color, weight, bulk, etc.

M. Stanislaus Julien claims to have discovered in an ancient Chinese medical record, called "Kon-kin-i-tong," certain data from which it appears that, as far back as the third century of our era, the Chinese were in possession of an anæsthetic agent, which they employed for producing insensibility during surgical operations. In a biographical notice of Hoa-tho, who flourished under the dynasty of Wei, between the years 220 A. D. and 280 A. D., it is stated that he gave the sick a preparation of Cannabis (*Ma-yo*), who, in a few moments, became as insensible as one plunged in drunkenness or deprived of life. Then, according to the case, he made incisions, amputations, and performed various other surgical operations. After a certain number of days the patient found himself reestablished, without having experienced the slightest pain during the operation. It appears, from the biography of Han, that this Cannabis was prepared by boiling and distillation. Be this statement true or false, it will not lessen the honor due to Horace Wells, a statue of whom is about to be erected in Hartford, Conn., though its truth would conflict somewhat with the statement made in the *Medical and Surgical Reporter*, in which the editor, commending the action of

he citizens of Hartford, says: "This is a well-deserved honor, for there is nothing plainer or more capable of demonstration than that Horace Wells was the first one who employed an anesthetic in surgical operations."

M. Cherin, of Lyons, has for some time past practised a method of curing stammering, the efficacy of which is vouched for by a commission of scientific medical gentlemen especially appointed to investigate and report thereon. The entire course of treatment occupies three weeks. During the first period, the stutterer is restricted to absolute silence, in order to break his vicious habit in articulating; in the second stage, he is exercised in the deliberate and distinct pronunciation of vowels, consonants, syllables, and sentences, uttered while the breath is evenly expelled from the lungs after a slow and full inspiration; and the final stage is devoted to acquiring fluency of speech. This method is reported to have proved efficacious in the worst cases, and the permanency of the cure is assured if the patient will occasionally practise by himself the exercises taught.

At the last examination in anatomy held at the University of Berlin, two candidates alone from the thirteen who presented themselves obtained the notice "good." One of these was a Japanese medical student, named Sasumi Satoo, whose father is principal physician to the mikado. The intellectual labor and the amount of perseverance needed to gain this success will be appreciated when it is known that, in November, 1869, the time when Sasumi Satoo began his studies at Berlin, he did not even know the German characters. The first five months were devoted exclusively to the study of German, and, in six months after acquiring this language, he had also mastered Latin, and was prepared for the first examination.

Mr. William B. Gage, a master-mechanic in the employ of the Delaware and Hudson Canal Company, is said to have invented a self-adjusting railway-switch, which, in design and purpose, gives promise of most important results. The operations of the switch are automatic, and its movements are based on the familiar switchman's law: "Keep the main track open." One important feature of this improvement is that, while the switch can be made to command eight side-tracks, it will, when not in operation, adjust and look itself to the main track only, and, as the action is automatic, it is impossible for any passing train to be switched off from the main line, however neglectful of his duty the switchman may be.

The *Railway Times* describes a novel method which has been adopted to prevent the recurrence of an echo in the new court-house at Bloomington. A Mr. Carlock suggested that the stretching of small wires at a proper height and at suitable distances would be of great benefit. This was tried, and with most favorable results. The presence of the wires, which were so small as to be hardly visible, served to break the sound-waves, and thus prevent reverberation; and it is stated that three or four wires only crossing the room were found sufficient to effect this wonderful change.

Dr. Hochstetter, in the *Revue Hebdomadaire de l'Union*, describes some curious experiments with sulphur, which serve to explain certain volcanic phenomena. When sulphur is melted under water, and with a pressure of forty-five pounds to the square inch, the sulphur absorbs some of the fluid. As the sulphur cools,

this is driven out as steam, accompanied by explosions. When the quantity of sulphur is large, an upheaval takes place, craters are formed, and molten sulphur ejected.

Dr. Hilgendorf, senior professor of the Polytechnic Institute in Dresden, and formerly director of the Zoological Gardens of Hamburg, has accepted the chair of Natural Science in the School of Medicine at Jeddo. Dr. Cochins, formerly attached to the Victoria College in Berlin, has also been called, as a professor of Physics and Chemistry, in the same establishment.

Mr. Gladstone and Mr. Darwin having both declined the lord-rectorship of Aberdeen University, about to be vacated by Mr. Grant Duff, M. P., the contest now lies between Professor Huxley and the Marquis of Huntley—the art-students favoring the latter, and the medical students the former.

At present the whole number of marine telegraphic cables laid is two hundred and thirteen, having a total length of forty-three thousand seven hundred and eighty-three miles.

Dr. Vogel, president of the Berlin Society for the Advancement of Photography, has been made a Professor of Photography at the Royal Industrial College.

## Home and Foreign Notes.

BEFORE the Franco-Prussian War there were, it is said, twenty thousand artists in Paris. There are superior facilities for students of art, for women as well as for men, at the French capital. Free schools for beginners in drawing are open to both men and women of all nationalities, and at the Jardin des Plantes lectures are given on anatomy and anatomical drawing, and students can draw from the life. At the School of Fine Arts, which is open only to men, instruction is given in drawing, engraving, designing, painting, and sculpture. It is free to foreign students under thirty years of age, and they may compete for the medals. Students who win prizes are sent to Rome by the Government, and supported for two years in the pursuit of their studies. Great artists like Gerome and Cabanel visit the school regularly to criticise the productions of the pupils. There are private-schools where lady students have opportunities for drawing from models, both draped and undraped, at light expense.

Here is what George Sand writes about her every-day life: "You want to know how I pass my days here? I rise at seven in the morning, and drink a cup of chocolate. Then I read the papers and letters until eight. For the next four hours I write, filling often twenty sheets of paper. Then I take an hour's ride on horseback. Upon my return home I eat a large meal, for my appetite is excellent, and, believe me, I relish my Burgundy with it. After the repast I take a short nap, and then return to my desk, where I remain until seven, when I take a walk. Then I eat another hearty meal, and while away the remaining hours of the evening by playing with my grandchildren. That is a very monotonous life, you will say. Yes; but it suits me, and I am happy."

The plan of an elevated railway for New York, known as the Gilbert, is now certain to be carried out, an arrangement having been made by the owners of the franchise with the Erie Company. By means of a bridge across the Hudson at Peekskill, trains over the Erie road will enter the city on the Gilbert track, and deliver passengers at any point in the city. The elevated track will be laid on arches twenty-four feet high, supported by columns at the curbstone. It will not interfere with sidewalk, streets, or buildings; will not obstruct the light; will improve rather than injure the streets through which it passes. It is undoubtedly the best plan projected. It is prom-

ised that a large portion of the road will be in running order within a year.

There is a bill before Congress to convert Mackinaw Island into a national park. This beautiful gem of the Lakes is situated in the straits between Lake Huron and Lake Michigan; in length it is three miles, in width about two. It is one of the oldest settlements in the West; was discovered by the early French explorers two hundred years ago; was for a long time a famous fur-depot; and is now a military post of the United States. It is one of the most truly beautiful and picturesque places in the country, and in recent years has become a place of resort for summer pleasure-seekers.

The original size of the Erie Canal was twenty-eight feet on the bottom, forty feet on the surface, and four feet in depth. In 1862 its enlargement was completed, which made it fifty feet wide at bottom, seventy on the surface, seven in depth, and capable of floating a boat carrying two hundred and thirty tons. It is now proposed to enlarge it to the capacity of floating vessels of six hundred tons' burden. The Welland Canal, from Lake Erie to Ontario, passes vessels of six hundred tons, and is to be enlarged to double its present capacity.

The King of Bavaria, being pleased with sleigh-riding on the frozen lakes near Hohen-schwangau, has ordered the construction of a gorgeous sleigh, at an expense of one hundred thousand florins. Meanwhile, his young relative, the Prince of Turn and Taxis, who is related to some of the royal houses of Europe, has been declared by the Bavarian courts "a spendthrift, unable to take care of his money," and an official guardian, who will take care of his property, has been appointed for him.

Anthony Trollope, since his return to England from his journeyings in Australia, has proposed the construction of a railroad across the great island. It would shorten the distance between Europe and the large cities of Australia by way of the Suez Canal several thousand miles, and would open up to settlement a vast country, whose mineral wealth would be likely to repay the cost of the road.

The number of children set down as attending the public schools of New-York State, during the past year, is 1,010,242; private schools, 131,519; and the normal schools, 5,657. The total number of persons in the State between five and twenty-one years of age, is 1,520,628. The total number of public school-houses is 11,740, the estimated value inclusive of sites being \$28,632,967.

The Queen of Greece has founded a society for reforming the language at present spoken by her subjects. She says that a very slight effort will be required to revive in modern Hellas the beautiful tongue written and spoken by Plato, Xenophon, and Sophocles. That may, perhaps, be so; but will anybody compare the Greeks of our times to their ancestors under Pericles and Alcibiades?

M. Mariotta, a Frenchman, has devised a new process of preserving meat fresh by dipping it into melted butter and then packing it in salt. The results are said to be satisfactory, but the process may not differ from that of dipping meat into melted paraffine, which answered in temperate zones, but failed utterly in tropical regions.

The last forty-one galley-slaves were removed from the Bagne de Toulon a few weeks ago, and that famous penal establishment has now been closed forever. All these forty-one convicts had been sent there for life. Ten of them were set at liberty, among them one who had worn his chains for forty-seven years. The rest were sent to Cayenne.

In more than half of the United States aliens are accorded the right to hold and convey real estate. It would be for the interest of the country if like privileges were accorded in all the States. In New York the ancient law continues in force, driving capital away to neighboring States.

A gang of swindlers, pretending to be Mormon emissaries, have been very successful in Paris in selling certificates of a pretended Mormon loan. The principal parties engaged in the fraud have been arrested.

The son of ex-King George V., of Hanover, whose betrothal to the Princess Thyra, of Denmark, was recently denied, is said in Vienna to be engaged to the young daughter of a wealthy resident of this city. In that event our young countrywoman would become a near relative of Queen Victoria.

The gigantic criminal trial against the bandits of Central Hungary was commenced in December last at Szegedin. The chief of the accused, who number nearly four thousand, is the famous robber Rozsa Sandor. The whole number of indictments found against the prisoners is eight thousand!

The *République Française*, a Democratic Paris journal, denies, on the authority of Victor Hugo himself, that the great poet and romanticist, as has recently been reported, has lost almost his whole fortune. The journal in question says that M. Hugo is not a rich, but by no means a poor man.

Count von Roon, the present Prime-Minister of Prussia, and, on account of his talents as a military organizer, called the Carnot of his country, is more of a *savant* than a soldier. He was the favorite pupil of the illustrious Bitter, and has written a number of valuable works on geography.

The King of Denmark has refused to recognize the Princess-dowager of Schleswig-Holstein-Noer, *née* Miss Lee, of Boston, as a member of the royal family. Her husband, Prince Frederick, has been implicated in the revolutionary movement of the Elbe duchies against Denmark in 1848.

Netchayeff, the Russian Internationalist leader, whom the Swiss authorities at Zurich had surrendered to the Russian Government, because he was charged with assassination, has escaped from his prison, and is believed to have fled to the United States.

There are one hundred and forty-nine savings-banks in New-York State, with assets amounting to about three hundred million dollars, the number of depositors being upward of seven hundred and seventy-six thousand.

Six establishments in New Orleans, with an aggregate capital of one million five hundred thousand dollars, are engaged in the manufacture of oil and oil-cake from cotton-seed, the yield being one hundred thousand tons per annum.

The Western Calendar has been adopted in Japan. Though the names of the months and days accord with ours, the Government adheres to the old names for the years, the present year being known as the sixth year of Merdi.

Dr. Rudolph Doehn, formerly a member of the Missouri Legislature, and noted for his translation of Badeau's "Military Life of General Grant" and other American works, is now chief editor of the *Dresden (Saxony) Press*.

Bayard Taylor has been lecturing in Germany with success. His subject was American literature. The lecture was delivered in German, and was illustrated by translations from some of our poets.

The Japanese students in Paris make less progress in their studies than their young countrymen in England and Germany. They find it more difficult to learn French than English or German.

The custodian of the Imperial Library in Berlin offers a reward of five hundred dollars for the return of seven exceedingly valuable medical manuscripts that have recently been purloined from that establishment.

On the centenary of the death of Sweden's great naturalist, Linnaeus, January 10th, Stockholm honored his memory by unveiling a statue.

A new instrument of death has been introduced in Sweden. It is a sickle-shaped knife, and is said to be by far preferable to the guillotine.

The use of the microscope is rapidly becoming recognized as a valuable aid to the geologist in deciphering the minute structure of rocks.

## The Record.

### A WEEKLY RETROSPECT OF EVENTS.

**JANUARY 11.**—M. de Corcelles appointed French ambassador at the Vatican in place of M. Bourgoing.

Dispatch that the Spanish troops and a band of Carlists had an engagement in Valencia on the 10th inst., in which thirty-two of the latter were killed and thirty taken prisoners. The Carlist leader, Freyola, killed by government troops. Death of Castello, another chief, announced.

The boiler of the steamer Julia exploded near Eufala, Ala.; five persons killed.

Intelligence that the schooner Congress foundered at sea off Rockport, Texas; two of the crew rescued after drifting six days, the rest lost.

Mrs. Lydia Sherman, of New Haven, sentenced to imprisonment for life for poisoning her husband. She confesses to having poisoned eight persons.

**JANUARY 12.**—A great popular demonstration at Madrid in favor of the proposed abolition of slavery in Porto Rico.

Carlists active in the north of Spain, and volunteer bands forming to suppress their depredations.

Advices that Major Brown's command had fought the Apache Indians on Salt River, thirty miles above Fort McDowell, in Arizona, killing fifty-seven and capturing twenty.

Accident on the St. Louis, Kansas City and Northern Railroad; thirteen passengers injured. Freight-train, near Chester, Pa., thrown from the track, and two men killed.

**JANUARY 13.**—Several Internationals arrested at Narbonne, France.

A manifesto, numerously signed by the nobility, appears at Madrid, opposing the policy of the Government in the Antilles, and advocating the gradual abolition of slavery in Porto Rico.

Governors McEnery and Kellogg both inaugurated in Louisiana.

The Louisiana election troubles referred by the House to the Judiciary Committee. A resolution adopted authorizing the committee to investigate the conduct of Judge Durell.

Commissioners leave Washington to investigate outrages of Mexicans on the Texan border.

Governor Hendricks, of Indiana, installed.

Incendiary fire at Boston; destructive fires at Saratoga, N. Y.; Toledo, O.; Newburyport, Mass.; Petrolia and Centralia, Pa.; Rutland, Vt.; Amsterdam, N. Y.; Weston, Mo.; and in New York.

**JANUARY 14.**—Seven persons burned to death at a fair in Lichfield, England.

Town Theatre of Odessa, Russia, destroyed by fire.

Report of an earthquake at Soonghur, India, destroying the town and fifteen hundred of its inhabitants.

Dispatch that a conspiracy to assassinate the President of Peru had been frustrated, and the leaders arrested.

Report that a revolutionary plot had been discovered at Arequipa, and the participants banished.

Governor Oglesby, of Illinois, installed.

The Agricultural and Industrial Arts College Bill passes the Senate; also a bill amending the national currency act.

Gas-explosion in a cotton-mill at Hartford, Conn., killing one man and injuring five others.

Advices from Minnesota, describing the recent snow-storm as the most terrible known there. Twenty persons frozen to death, and numbers of horses and oxen.

**JANUARY 15.**—Obsequies of the ex-Emperor Napoleon at Chiselhurst. Twenty-five thousand persons view his remains, lying in state. Sixty thousand visitors assembled. Many Bonapartists and a deputation of Paris workmen join in the funeral procession. Funeral services are also held at Rome, Milan, and throughout Roumania.

Boiler-explosion in a factory at Charleroi, Belgium; eleven persons killed, many wounded.

A fire at the residence of the late Edwin Forrest, at Philadelphia, seriously damages the library.

The Legislative, Executive, and Judicial Appropriation Bill is passed by the House. A bill is discussed for the consolidation of the Indian tribes under a civil government, to be called the Territory of Oklahoma.

Testimony before the Crédit Mobilier committees implicates a number of Congressmen.

A detachment of five hundred Spanish troops sails for Cuba.

The largest Carlist band in Biscay dispersed; the leader, Goiriena, escaping.

Intelligence that the ship Tuscarora, bound from Mobile to Liverpool, foundered off Gibraltar, with loss of captain and ten men.

**JANUARY 16.**—Intelligence of the burning of the steamship Erie at sea, off Pernambuco, 1st inst.

Advices of bloody election-riots in Parana, Brazil. Many persons killed.

Dispatch of the wreck of the ship Chillingham Castle, from Shields to Malta. Loss of twenty-six on board.

Intelligence that war is imminent between Japan and Corea.

The Emperor of China reported as greatly incensed against foreigners, owing to an attempt to assassinate him by means of explosive candles.

Advices of the capture and destruction of many Chinese pirate-vessels by the French corvette Bourayne and Chinese gunboat Chun Her.

Indian depredations reported in Southern Oregon.

Announcement of the cession of the Bay and Peninsula of Samana, in San Domingo, to an American company.

Dispatch that the steamer Edgar Stuart had landed munitions of war for the Cuban insurgents at ports Lino and Quao.

The ex-Empress Eugénie and her son hold a reception at Chiselhurst, at which one thousand distinguished Frenchmen are present.

Death, in New York, of Rev. Joshua Leavitt, D. D., aged seventy-eight.

Destructive fire in Eighth Avenue, New York; also fire in Duane Street. Extensive fire at Greenville, Pa. First Congregational Church, of Chicago, destroyed by fire.

**JANUARY 17.**—Advices from Zanzibar that Dr. Livingstone had received supplies forwarded to him by Stanley, and again started for the interior of Africa, August 18th.

Carlists reported as acting with terrible cruelty in the north of Spain, murdering and mutilating those opposing them, and forcing hundreds to join the insurgent ranks.

Intelligence of the wreck of the schooner Hannah Little, off Cape Hatteras. Fate of the crew unknown.

Several railroad disasters: on the Little Miami Railroad, Ohio, no lives lost; on Eastern Railroad, Maine, twenty persons injured; by Western Express, near Allentown, Pa., by sinking of track, no lives lost; on the Housatonic road, Conn., no lives lost; on the Alleghany Valley road, Pa., sleeping-car jumped the track, one man killed, others wounded.

Travel between Spain and France suspended, on account of Carlist threats.

Offer of compromise by the Kellogg Legislature, Louisiana.

Great thaw in Middle and Northern States, and much damage from floods.

**JANUARY 18.**—Stringent measures have been adopted by the French Government against imperialism.

The Committee of Thirty of the French Assembly has asserted the constituent power of the Assembly.

Freshets are reported in Pennsylvania and adjoining States.

Death of Lord Lytton Bulwer, distinguished novelist, poet, and statesman.

## Contemporary Portraits.

Madame Trebelli-Bettini.

WE give a portrait of the distinguished contralto, whose recent operatic successes have filled the London world with de-



light. Mdle. Zelle Gillebert (such was her maiden name, which, by an inversion, is Italianized into Trebelli) was born in Paris in 1840; made her first appearance in the lyric drama at Madrid, in 1860, where her success was notable. She played with Grisi and Mario. Her subsequent engagement with Signor Merelli produced a succession of triumphs in the different cities of Germany. These triumphs brought her to the Italian Theatre, Paris, and, in 1863, she opened at Her Majesty's Theatre, London, appearing as *Orsini*, in "Lucretia Borgia." Her reception was enthusiastic, and from that day she has maintained a high place in the estimation of the English operatic public. In 1863 she was married to the celebrated tenor, Bettini; and, soon after the marriage, she



MADAME TREBELLI-BETTINI.

appeared conjointly with her husband in Warsaw, St. Petersburg, Moscow, and in England. Meyerbeer, who was a friend, was so sanguine as to the success of her vocal powers, that he used every means to induce her, in 1867, to sing the part of *Dinorah*, at the Opéra Comique, in Paris; and then, again, in 1860, in Berlin, he tried to induce her to accept the rôle of his "Africaine." But his efforts were fruitless, for no other reason than that Madame Trebelli had resolved on the Italian career, both those works having been written for the French Theatre. In 1862, while in Riga, the tenor advertised for the *Barbiers* having suddenly fallen ill, Madame Trebelli undertook the part at a moment's notice, and her extraordinary impersonation was enthusiastically greeted.

#### FACTS FOR THE LADIES.

Mrs. Dr. W. TORRENCE, New York, uses her Wheeler & Wilson Lock-Stitch Machine for her own family sewing, and, besides doing her house-work, earns more than a dollar per day as pastime. See the new Improvements and Wood's Lock-Stitch Ripper.

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